

# **AB900 APPLICATION**

**Potrero Power Station Mixed-use Project**

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## INTRODUCTION

California Barrel Company, LLC (CBC), the project sponsor, proposes the development of a 29-acre site comprising of a mix of uses including residential, office, retail, laboratory, structure parking, and production, distribution, and repair at the former Potrero Power Plant that closed in 2011, within the Central Waterfront Plan Area of San Francisco.

CBC seeks certification of the Potrero Power Station Project as an Environmental Leadership Development Project (ELDP) pursuant to Assembly Bill 900, Jobs and Economic Improvement through Environmental Leadership Act of 2011 (and as updated by AB 734 (Chapter 210, Statutes of 2016) and AB 246 (Chapter 522, Statutes of 2017), and California Environmental Quality Act (CEQA) Section 21178 et seq.

### Project Description

The proposed project would rezone the site, establish land use controls, develop design standards, and provide for development of residential, commercial [including office, research and development (R&D)/life science, retail, hotel, entertainment/assembly, and production, distribution, and repair (PDR)], parking, community facilities, and open space land uses. **Attachment 1** shows the project location and site.

The proposed project would include amendments to the General Plan and Planning Code, creating a new Potrero Power Station Special Use District (SUD). The proposed rezoning would modify the existing height limits of 40 and 65 feet to various heights ranging from 65 to 300 feet.

Overall, the proposed project would construct up to approximately 5.4 million gross square feet (gsf), of uses, including between approximately 2.4 and 3.0 million gsf of residential uses (about 2,400 to 3,000 dwelling units), between approximately 1.2 and 1.9 million gsf of commercial uses (office, R&D/life science, retail, hotel, and PDR), approximately 922,000 gsf of parking, approximately 100,000 gsf of community facilities, and approximately 25,000 gsf of entertainment/assembly uses. Most new buildings would range in height from 65 to 180 feet, with one building at 300 feet. Approximately 6.3 acres would be devoted to publicly accessible open space. A more detailed breakdown of proposed land uses is described below in **Table 1**.

The proposed project would include transportation and circulation improvements, shoreline improvements, and utilities infrastructure improvements. Transportation and circulation improvements would include: a continuous street network, connecting to the planned Pier 70 Mixed-Use District project directly north of the project site; new bus stop and shuttle service; and installation of traffic signals at the intersections of Illinois Street at 23rd and Humboldt streets. The roadway network would be designed to be accessible for all modes of transportation, including vehicular, bicycle and pedestrian improvements. In addition to development of waterfront parks, proposed shoreline improvements would include construction of a floating dock extending out and above the tidal zone to provide access from the site to the bay for fishing and suitable recreational vessels and stormwater drainage outfalls. The proposed project would construct infrastructure and utilities improvements to service the proposed development,

including potable, non-potable, and emergency water facilities; wastewater and stormwater; and natural gas and electricity distribution.

Project construction would likely occur in seven overlapping phases (Phase 0, and Phases 1 through 6), with each phase lasting approximately three to five years. Following the initial demolition, site preparation and rough grading for the entire site, the first phase of construction is anticipated to start on the southeast portion of the project site and the last phase of construction would end in the northwest portion of the project site. Total construction is estimated to occur over a 15-year period, and is anticipated from the beginning of 2020 to the end of 2034, but could occur over a somewhat longer or shorter period, depending on market conditions and permitting requirements.

**TABLE 1**  
**POTRERO POWER STATION MIXED-USE DEVELOPMENT PREFERRED PROJECT CHARACTERISTICS<sup>a</sup>**

<b>Project Characteristic</b>	<b>Metric</b>	
<b><i>Project Site Size and Shape</i></b>	<b><i>Dimensions</i></b>	
Area	29.0 acres	
Maximum Length and Width	Approximately 1,650 feet by 950 feet	
<b><i>Proposed Land Use Program<sup>b</sup></i></b>	<b><i>Area (gsf)</i></b>	
Residential	2,682,427	
Commercial (Retail)	107,439	
Commercial (Office)	597,723	
Commercial (R&D/life science)	645,738	
Commercial (Hotel)	241,574 <sup>c</sup>	
Commercial (PDR)	45,040	
Community Facilities	100,938	
Entertainment/Assembly	25,000	
Parking	921,981	
Total Building Area	<b>5,367,860 gsf</b>	
<b><i>Proposed Dwelling Units</i></b>	<b><i>Number</i></b>	<b><i>Percentage (approximate)</i></b>
Studio	388	14.5%
1-Bedroom	1,159	43.2%
2-Bedroom	867	32.3%
3-Bedroom	268	10.0%
Total Dwelling Units	<b>2,682</b>	<b>100%</b>
<b><i>Proposed Parking</i></b>	<b><i>Number</i></b>	
Vehicle Parking Spaces <sup>d</sup>	<b>2,622</b>	
Car Share Spaces	50	
Bicycle Parking <sup>e</sup>		
Bicycle Parking Class 1	1,577	
Bicycle Parking Class 2	373	
Total Bicycle Parking	<b>1,950</b>	
<b><i>Open Space</i></b>	<b><i>Area (gsf)</i></b>	
Publicly Accessible Open Space	Approximately 6.3 acres	
Private Open Space	36 square feet per unit if located on balcony, or 48 square feet per unit if commonly accessible to residents	
<b><i>Building Characteristics</i></b>	<b><i>Area (gsf)</i></b>	
Stories	5 to 30 stories	
Height	65 to 180 feet; one building at 300 feet	
Ground Floor	All blocks would include ground floor active/retail/production space	
Basements	All development blocks would allow but not require one below-grade level of vehicle parking spaces <sup>f</sup>	



**TABLE 1 (CONTINUED)**  
**POTRERO POWER STATION MIXED-USE DEVELOPMENT PROJECT CHARACTERISTICS<sup>a</sup>**

NOTES:

gsf = gross square feet; R&D = research and development; PDR = production, distribution, and repair

<sup>a</sup> All numbers in this table are approximate.

<sup>b</sup> The proposed project includes a number of flex blocks (see Attachment 1, Proposed Land Use Plan), for which either residential or certain commercial uses may ultimately be selected. The numbers shown in this table show the anticipated development of the flex blocks, assuming a targeted amount/type of residential and commercial development at each flex block. The EIR addresses the potential for variation in the total amount of residential and amount and type of commercial development on the flex blocks.

<sup>c</sup> The hotel would consist of 220 hotel rooms.

<sup>d</sup> 0.6 space per residential unit; one space per 1,500 square feet of commercial office, R&D/life science, or PDR uses; three spaces per 1,000 square feet of grocery store use and one space per each 16 hotel guest rooms.

<sup>e</sup> The number of bicycle parking spaces reflects Planning Code requirements, as follows.

- Residential: One Class 1 bicycle parking space for each dwelling unit up to 100 plus one space for every four units in excess of 100; one Class 2 bicycle parking space for every 20 dwelling units.
- Office: One Class 1 bicycle parking space for every 5,000 square feet of occupied floor area; two Class 2 bicycle parking spaces up to 5,000 square feet of OFA plus one for each 50,000 square feet of OFA in excess of 5,000 square feet.
- PDR, R&D/life science: One Class 1 bicycle parking space for every 12,000 square feet of OFA; two Class 2 bicycle parking spaces up to 50,000 square feet of OFA, and an additional two for spaces in excess of 50,000 square feet of OFA.
- Retail: One Class 1 bicycle parking space per 7,500 square feet of OFA; minimum two Class 2 bicycle parking spaces with a rate of one per 2,500 square feet up to 50,000 square feet and an additional space for each additional 10,000 square feet.
- Hotel: One Class 1 space per 30 rooms; one Class 2 space per 30 rooms and one Class 1 space per 5,000 square feet of conference space.

<sup>f</sup> Basement parking is accounted for in the above line item for parking.

SOURCE: California Barrel Company, EEA PPA Application Package, Potrero Power Station Mixed Use Development, October 2017

## CONSISTENCY WITH STATUTORY REQUIREMENTS FOR CEQA STREAMLINING

The following information shows how the proposed project and variant satisfy the statutory requirements for the California Environmental Quality Act (CEQA) streamlining as further informed by the criteria set forth in the Governor's Guidelines for Streamlining Judicial Review under CEQA (Public Resources Code Section 21178 et seq.). As defined in Public Resources Code Section 21180(b)(1), the project application provides the following information sufficient to enable the Governor to determine that the proposed project satisfies the statutory requirements for CEQA streamlining:

***(1) The project is residential, retail, commercial, sports, cultural, entertainment, or recreational in nature.***

The proposed project is residential, commercial, and recreational in nature. Residential facilities would comprise the largest use (approximately 60 percent of the total gross square footage (gsf)) and includes up to 2,682 dwelling units, providing residences for up to 6,842 residents under the preferred project scenario. The dwelling unit mix comprises of 388 studios, 1,159 one-bedroom, 867 two-bedrooms, and 268 three-bedrooms.

A variety of commercial uses are proposed, including approximately 107,439 square feet of retail, 597,723 gsf of office, 645,738 gsf of laboratory use, 241,574 gsf of hotel, 25,000 gsf of entertainment / assembly, and 45,040 gsf of production, distribution. Approximately 6.2 acres of open space are proposed, providing active and passive recreation opportunities. The remaining proposed use includes approximately 100,000 gsf of community facilities. While a centralized parking structure is proposed, all parking would be accessory to the residential and commercial uses on-site. A proposed land use plan is included in **Attachment 1** while project drawings such as a location map of open spaces, a depiction of

the waterfront park concept, and figure exhibiting the project's proposed urban form are included in **Attachment 2**.

***(2) The project, upon completion, will qualify for LEED gold certification. The application shall specify those design elements that make the project eligible for LEED gold certification, and the applicant shall submit a binding commitment to delay operating the project until it receives LEED gold certification. If, upon completion of construction, LEED gold certification is delayed as a result of the certification process rather than a project deficiency, the applicant may petition the Governor to approve project operation pending completion of the certification process.***

The overall design for the proposed project would meet or exceed current uniform codes designed to achieve a Leadership in Energy and Environmental Design (LEED) Gold rating. The new buildings would include energy efficiency, water conservation, low-impact development, and other green-building practices, which would be incorporated into the final design to achieve a minimum LEED Gold certification.

The LEED rating system offers four certification levels for new construction that correspond to the number of credits accrued in categories for location and transportation, sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation, and regional priority (USGBC 2015). There are four levels of certification to acknowledge the degree of achievement. The number of points that the proposed project or variant earns determines the level of LEED certification that the proposed project or variant will receive:

- LEED Certified™: 40-49 points earned
  - LEED Silver®: 50-59 points earned
  - LEED Gold®: 60-79 points earned
  - LEED Platinum®: 80+ points earned
- LEED provides a level of flexibility for projects to choose the exact credits and project features. At the time of this application, the exact LEED credits and project features that would be selected to achieve LEED Gold certification (i.e., 60-79 LEED points) have not yet been determined. However, some of the design features that are anticipated for contributing to achievement of LEED certification include:
    - Materials and Resources. Credits for Construction and Demolition Waste Management. According to the Waste Management Plan, the proposed project or variant would recycle at least 75 percent of construction waste materials and is in accordance with State and City and County of San Francisco diversion targets that target a minimum of 75 percent of construction and demolition materials to be diverted from landfill disposal. Additional ways to address materials and resources could include achieving points in the following credits: Environmental Product Declarations, Sourcing of Raw Materials, and Material Ingredients.
    - Location and Transportation. Credits based on the proposed project or variant being located on a currently developed site with surrounding density and diverse land uses to promote walkability and transportation efficiency. Credits for access to high quality transit. Local transit service to the project area is provided by the San Francisco Municipal Transportation Agency (MUNI) in the form of above-ground trolley (light rail), below-ground light rail, and above-ground route bus

services and by Bay Area Rapid Transit (BART) in the form of below-ground rail. The proposed project would locate the functional entries of the project within a mile walking distance of light rail and bus stops.

- **Energy and Atmosphere.** Credits for optimized performance and renewable energy production. The project is exploring opportunities to shared heating and cooling systems between buildings with complementary program types to optimize energy efficiency specially. For specific rooftops, photovoltaics will be provided for consistency with San Francisco's Better Roofs Ordinance. Additional energy efficiency measures could include: Energy Star-labeled products and appliances, including dishwashers in the residential units, where appropriate; use of light emitting diode (LED) lighting or other energy efficient lighting technologies, such as occupancy sensors or daylight harvesting and dimming controls, where appropriate, to reduce electricity use; controllable thermostats, operable windows in residential units, and mechanisms to allow for efficient indoor air management, where appropriate. Additional energy efficiency measures would focus on load reduction and HVAC-related strategies and would be analyzed during the design process.
- **Water Efficiency.** Credits for maximizing water efficiency including the use of low-flow flush and flow fixtures for faucets and toilets to reduce indoor water use by a minimum of 20 percent over a LEED v4 baseline and would be required to meet local plumbing code standards. Additional water efficiency credits could include: the use of Energy Star-labeled products and appliances, including dishwashers in the residential units, where appropriate, would further improve water efficiency. The approach the project is taking towards shared energy systems would also reduce water demand and improve water efficiency. The proposed project would reduce outdoor water use by a minimum of 30 percent from the calculated baseline through selection of climate appropriate vegetation and efficient irrigation systems. Furthermore, the project would install onsite water systems to treat and reuse available alternate water sources for toilet and urinal flushing and irrigation. Because final LEED certification is not granted until a project is completed and operational, the project sponsor will petition the Governor to approve construction and project operation pending completion of the certification process, as permitted under Public Resources Code Section 21178 et seq.

***(3) The project will achieve at least 15 percent greater transportation efficiency than comparable projects. The applicant shall provide information setting forth its basis for determining and evaluating comparable projects and their transportation efficiency, and how the project will achieve at least 15 percent greater transportation efficiency. For residential projects, the applicant shall also submit information demonstrating that the number of vehicle trips by residents divided by the number of residents is 15 percent more efficient than for comparable projects. For the purposes of this provision, comparable means a project of the same size, capacity and location type.***

The Project will establish a strong pedestrian and bicycle network that connects to existing and planned networks in the Dogpatch / Central Waterfront neighborhood. The project's proposed pedestrian and bicycle facilities are comprised of continuous sidewalks, curb ramps, painted, high-visibility crosswalks at intersections, raised crosswalks at certain mid-block crossings, shared lanes, dedicated bicycle lanes, protected bicycle lanes, and the construction of the Blue Greenway multi-use trail along the waterfront. In addition, the Project will signalize the intersections of Illinois at 23<sup>rd</sup> Street and Humboldt Street,

including the provision of new crosswalks with pedestrian countdown signals. Such amenities will encourage travel by modes of transportation other than the personal vehicle, contributing to transportation efficiency.

Secondly, the site will be highly transit-accessible for all residents, employees, and visitors as demonstrated by the available and proposed nearby transit services, outlined below:

- Local public transit service provided by MUNI includes the T Third light rail line that runs along Third Street with nearby stops at 20<sup>th</sup>, 23<sup>rd</sup> and Marin Streets, at 8-minute headways during the a.m. and p.m. peak periods, as well as the 22 Fillmore (8-minute headways) trolley coach route and 48 Quintara/24<sup>th</sup> Street (10 to 14 minute headways) motor coach routes. The nearest bus stop to the project site for the 22 Fillmore is a curbside stop at the north side of 20<sup>th</sup> Street between Third and Tennessee Streets (about 4 blocks northwest), while the nearest stop for the 48 Quintara/24<sup>th</sup> Street route is located on the north side of 22<sup>nd</sup> Street between Illinois and Third Streets (about 1.5 blocks northwest of the project site).
- In addition, to further integrate the Project within MUNI's local transit network, the Project will include a curbside bus layover onsite, at the north side of 23<sup>rd</sup> Street between Maryland and Delaware Streets, in anticipation of a future MUNI bus route extension into the project site.
- Regional transit service to/from San Francisco is provided by BART, AC Transit, WETA and Caltrain. BART provides access to the East and South Bay areas with nearest stations to the project site at the 24<sup>th</sup> Street Station about 1.8 miles to the southwest of the project site and accessed via the MUNI 48 Quintara/24<sup>th</sup> Street bus route, and the 16<sup>th</sup> Street station located about 1.9 miles to the northwest of the project site and accessed via the MUNI 22 Fillmore bus line. AC Transit operates multiple routes to and from the East Bay, all of which terminate at the Transbay Terminal near Main and Beale Streets, which can be accessed via the T-Third light rail line. WETA ferries provide service to between San Francisco and various cities in the East and North Bay areas. Ferry riders arrive to and depart from San Francisco via the Ferry Building, which can be accessed via the T Third light rail line. Caltrain provides commuter heavy-rail passenger service between San Francisco and the Peninsula and South Bay areas. Two Caltrain stations located in the vicinity of the project site are the 22<sup>nd</sup> Street station (about half a mile away) and the terminus at Fourth and King Streets (about 1.5 miles northwest of the project site).
- In order to strengthen the Project's transit connectivity with regional transit carriers, the Project includes implementation of a bus shuttle service, with service of at least 15-minute (and potentially 7.5-minute) intervals during weekday morning and evening peak periods. The shuttle service would provide access between the project site, the 22<sup>nd</sup> Caltrain station and the 16<sup>th</sup> Street BART station.

Thus, the project site is located within a transit area, serviced by MUNI lines with peak period headways of less than 15 minutes, and with existing major transit stops located within less than one quarter mile from the project site entrance. In addition, shuttle bus services implemented by the Project will directly connect the project site with regional transit hubs operated by BART and Caltrain.

In addition to the transit, bicycle and pedestrian connectivity described above, the Project will implement a robust Transportation Demand Management (TDM) Program with the goal of minimizing the number of single-occupancy vehicle trips (SOV) that could be generated by the project. The TDM Program targets a reduction in SOV trips by encouraging project residents and employees to select other modes of

transportation besides solo driving, including: walking, bicycling, transit, car-share, carpooling and vanpooling.

Several of the proposed TDM measures described below are currently proposed. It should be noted that these measures are subject to revision and will be coordinated with the San Francisco Planning Department at the time of project approval. See **Attachment 3** for the project's draft TDM Plan.

- **INFO-1: Strategic Multi-modal Signage/Wayfinding**

Provide multimodal wayfinding signage that can withstand weather elements (e.g., wind, rain) in key locations. That is, the signs shall be located externally and/ or internally so that the residents, tenants, employees and visitors are directed to transportation services and infrastructure, including:

- transit
- bike share
- car-share parking
- bicycle parking and amenities (including repair stations and fleets)
- showers and lockers
- taxi stands
- shuttle/carpool/Vanpool pick-up/drop-off locations

Wayfinding signage shall meet City standards for any on-street wayfinding signage, in particular for bicycle and car-share parking, and shall meet best practices for any interior wayfinding.

- **INFO-2: Real-time travel information**

Provide real time transportation information on displays (e.g., large television screens or computer monitors) in prominent locations (e.g., entry/ exit areas, lobbies, elevator bays) on the project site to highlight sustainable transportation options and support informed trip-making. At minimum, a Development Project should include such screens at each major entry/exit. The displays shall include real time information on sustainable transportation options in the vicinity of the project site, which may include, but are not limited to, transit arrivals and departures for nearby transit routes, walking times to these locations, and the availability of car-share vehicles (within or adjacent to the building), shared bicycles, and shared scooters.

- **INFO-3: Welcome packets for New Residents / Employees and Basic Ongoing Marketing**

Provide individualized, tailored marketing and communication campaigns, including incentives to encourage the use of sustainable transportation modes. Marketing services shall either be provided by the TDM coordinator or a communications professional. Marketing services shall include, at a minimum, the following activities:

- Promotions. The TDM coordinator shall develop and deploy promotions to encourage use of sustainable transportation modes. This includes targeted messaging and communications campaigns, incentives and contests, and other creative strategies. These campaigns may target existing and/or new residents/employees/ tenants.
- Welcome Packets. New residents and employees shall be provided with tailored marketing information about sustainable transportation options associated with

accessing the project site (e.g., specific transit routes and schedules; bicycle routes; carpooling programs, etc.) as part of a welcome packet. For employees, the packet should reflect options for major commute origins. New residents and employees shall also be offered the opportunity for a one-on-one consultation about their transportation options.

- **ACTIVE-1: Improved Walking Conditions**

For large projects, the property owner shall complete streetscape improvements consistent with the Better Streets Plan and any local streetscape plan so that the public right-of-way is safe, accessible, convenient and attractive to persons walking.

- **ACTIVE-2: Option A: Bicycle Parking: Code-Required Amounts**

Provide Planning Code required Class 1 and Class 2 bicycle parking spaces.

- **ACTIVE-3: Showers and Lockers for Employees**

The Development Project shall provide at least one shower and at least six clothes lockers for every 30 Class 1 Bicycle Parking spaces, but no fewer than the number of showers and clothes lockers that are required by the Planning Code.

- **ACTIVE-5A: Bicycle Fix-it Station**

Include a bicycle repair station consisting of a designated, secure area within the building, such as within a bicycle storage room or in the building garage, where bicycle maintenance tools and supplies are readily available on a permanent basis and offered in good condition to encourage bicycling. Tools and supplies should include, at a minimum, those necessary for fixing a flat tire, adjusting a chain, and performing other basic bicycle maintenance. Available tools should include, at a minimum, a bicycle pump, wrenches, a chain tool, lubricants, tire levers, hex keys/Allen wrenches, torx keys, screwdrivers, and spoke wrenches.

- **ACTIVE-5B: Bicycle Maintenance Services**

Offer bicycle maintenance services to each Dwelling Unit and/or employee, at least once annually, for 40 years. If requested by the Dwelling Unit and/or employee, the property owner shall pay for bicycle maintenance services minimally equivalent to the cost of one annual bicycle tune-up per Dwelling Unit and/or employee. Tune-ups include inspection and adjustment of brakes, derailleur/shifting mechanism, and cables, and chain cleaning and inspection for wear and tear on all bicycle components. The cost of a basic tune-up shall be estimated in consultation with local bicycle repair shops. The maintenance services shall be provided through an on-call bicycle mechanic, or through vouchers for nearby bicycle shops.

- **HOV-1: Transit /Multi-Modal Subsidy**

Proactively offer contributions or incentives to each Dwelling Unit and/or full-time employee, at least once annually, for the Life of the Project. If requested by a resident or employee, the property owner shall pay for contributions or incentives equivalent to the cost of a (25, 50, 75, or 100 percent) monthly Muni only "M" pass, or equivalent value in e-cash loaded onto Clipper Card, per Dwelling Unit, and/or employee.

- **HOV-2: Shuttle Bus Service**

Provide local shuttle service. The local shuttles will primarily provide service between the project site and regional transit hubs, commercial centers, and/or residential areas. Local shuttle service shall be provided free of charge to residents, tenants (employees), and guests. Shuttle stop locations shall be posted with shuttle schedules (or frequency and hours).

- **CSHARE-1: On-site Car and Scooter Share Parking**

Offer memberships to a Certified Car-share Organization, at least once annually, to each Dwelling Unit and/or full-time employee for the Life of the Project and/or provide up to 50 car-share parking spaces. If requested by the resident and/or employee, the property owner shall pay for, or otherwise provide, memberships minimally equivalent to one annual membership per Dwelling Unit and/or employee. Residents or employees shall pay all other costs associated with the car-share usage, including hourly or mileage fees. Any car-share parking space(s) provided shall comply with Section 166 of the Planning Code shall meet the availability and specifications required in the Planning Code. Any car-share parking spaces provided in excess of those required of the project by the Planning Code may be occupied by car-share vehicles operated by a Certified Car-share Organization or may be occupied by other car-share vehicles that the property owner provides for the sole purpose of shared use and that are operated in compliance with Section 166 of the Planning Code.

- **PKG-4: Minimize Parking Supply**

Provide off-street private vehicular parking (Accessory Parking) in an amount no greater than the off-street parking rate for the neighborhood (neighborhood parking rate), based on the transportation analysis zone for the project site.

- **PKG-1: Unbundle Parking**

All Accessory Parking spaces shall be leased or sold separately from the rental or purchase fees for use for the Life of the Development Project, so that residents or tenants have the option of renting or buying a parking space at an additional cost, and would, thus, experience a cost savings if they opt not to rent or purchase parking.

- **FAMILY-2: On-site Child Care**

Include an on-site childcare facility to reduce commuting distances between households, places of employment, and childcare. The on-site childcare facility must comply with all state and City requirements, including provisions within the San Francisco Planning Code. The childcare facility may be a stand-alone facility, or it may be a Designated Child Care Unit that meets all the provisions of Planning Code Section 414A.6(a). If a Designated Child Care Unit is provided for this measure, that unit shall provide child care for the Life of the Project.

## **VEHICLE MILES OF TRAVELED (VMT)**

The proposed project would include residential uses (about 2,682 units and 220 hotel rooms), commercial uses (597,723 gsf of office, 645,738 gsf of R&D, 45,040 gsf of PDR and 100,938 gsf of community facility uses), as well as retail uses (109,473 gsf of retail, 25,000 gsf of entertainment/assembly uses, and 6.3 acres of open space).

For the residential uses (including housing and hotel) existing average daily VMT per capita is 8.8 for the transportation analysis zone (TAZ) in which the project is located, TAZ 559. This is about 49 percent below the existing regional average daily VMT per capita of 17.2. Future 2040 average daily VMT per capita is 6.4 for TAZ 573, which is about 60 percent below the future 2040 regional average daily VMT per capita of 16.1.

For the office uses (including office, R&D, PDR and community facility uses) existing average daily retail VMT per employee for TAZ 559 is 14.6, which is about 24 percent below the existing regional average daily retail VMT per employee of 19.1. Future 2040 average daily retail VMT per employee for TAZ 573 is 10.1, which is about 41 percent below the future 2040 regional average daily retail VMT per employee of 17.0.

For the retail uses (including retail, entertainment/assembly, and open space uses) existing average daily work-related VMT per employee is 10.8 for the transportation analysis zone 559, which is about 28 percent below the existing regional average daily VMT per employee of 14.9. Future 2040 average daily work-related VMT per employee is 11.9 for TAZ 573, which is about 18 percent below the future 2040 regional average daily work-related VMT per employee of 14.6.

Thus, as described above, the project site is located within an area of the City where the existing and future 2040 VMT is more than 15 percent below regional VMT values.

### **VEHICLE TRIP GENERATION**

For transportation efficiency analysis purposes, the project's vehicle trip generation (calculated with the San Francisco Transportation Impact Analysis Guidelines) was analyzed and compared against a similar comparable development situated in the same quadrant of San Francisco (Southeast quadrant of Superdistrict 3) but with a less multimodal environment and a less robust TDM program (calculated utilizing the ITE Trip Generation Manual).

### **Project Trips per San Francisco TIA Guidelines**

Table 2 presents the estimated daily a.m. and p.m. peak hour vehicle trips by land use for the proposed project<sup>1</sup>. Vehicle trips were estimated by dividing the number of auto person-trips by the vehicle occupancy rates. As shown in the table, the project would generate approximately 19,520 daily vehicle trips and about 1,860 p.m. vehicle trips during the a.m. peak hour and 2,540 vehicle trips during the p.m. peak hour.

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<sup>1</sup> Potrero Power Station Mixed-Use Development Project, Case No. 2017-011878ENV, Estimation of Project Travel Demand Technical Memorandum to the San Francisco Planning Department, Adavant Consulting, April 30, 2018.



**Table 2 Potrero Power Station Vehicle Trip Generation by Land Use**

Scenario / Land Use Type	Daily Vehicle Trips	AM Peak Hour Vehicle Trip	PM Peak Hour Vehicle Trips
<b>Proposed Project</b>			
Residential	5,772	1,012	1,100
Hotel	255	33	39
General Office	2,522	295	271
Research & Development / PDR	1,394	311	264
Retail / Supermarket	2,868	69	188
Restaurant	5,514	64	511
Community Facilities / Open Space	1,196	79	165
<b>Total Proposed Project</b>	<b>19,522</b>	<b>1,862</b>	<b>2,540</b>

**Comparable Project Vehicle Trip Generation**

The trip generation was also analyzed for a comparable development in a less multimodal environment with fewer TDM measures assuming mode of travel percentages for a project located in Superdistrict 3. As shown in Table 3, the comparable development would generate approximately 29,040 daily vehicle trips and about 2,190 trips during the a.m. peak hour and 3,130 vehicle trips during the p.m. peak hour.

**Table 3 Comparable Project Vehicle Trip Generation by Land Use**

Scenario / Land Use Type	Daily Vehicle Trips	AM Peak Hour Vehicle Trips	PM Peak Hour Vehicle Trips
<b>Comparable Project</b>			
Residential	5,772	1,012	1,100
Hotel	329	44	53
General Office	3,353	407	376
Research & Development / PDR	1,854	429	366
Retail / Supermarket	4,133	101	278
Restaurant	8,001	93	752
Community Facilities / Open Space	1,501	100	207
<b>Total Comparable Project</b>	<b>24,944</b>	<b>2,185</b>	<b>3,131</b>

**Comparison of Project and Comparable Development Trip Generation**

As previously shown in Table 2 and Table 3, the Project would generate 19,522 daily vehicle trips, and 1,860 and 2,540 vehicle trips during the a.m. and p.m. peak hours, respectively. Similarly, the comparable development project would generate 24,940 daily vehicle trips, and 2,190 and 3,130 vehicle trips during the a.m. and p.m. peak hours, respectively. Table 4 shows the difference in vehicle trip generation between the project and the comparable development, which indicates that the project would achieve a 28 percent decrease in daily vehicle trips and a 17 percent decrease in vehicle trips during the a.m. peak hour and a 23 percent decrease in vehicle trips during the p.m. peak hour.

**Table 4 Project vs. Comparable Project Vehicle Trip Generation by Land Use**

Scenario / Land Use Type	Daily Vehicle Trips	AM Peak Hour Vehicle Trips	PM Peak Hour Vehicle Trips
<b>Proposed Project minus Comparable Project</b>			
Residential	0	0	0
Hotel	-75	-11	-14
General Office	-831	-112	-104
Research & Development / PDR	-459	-118	-101
Retail / Supermarket	-1,265	-32	-89
Restaurant	-2,487	-29	-241
Community Facilities / Open Space	-305	-21	-42
<b>Total Proposed Project minus Comp. Project</b>	<b>-5,422</b>	<b>-323</b>	<b>-592</b>
<b>Percent Decrease</b>	<b>-28%</b>	<b>-17%</b>	<b>-23%</b>

Based on the comparison of the daily a.m. and p.m. peak hour vehicle trip generation for the project and the comparable development in a less multimodal environment with fewer TDM measures, the project would achieve greater than the 15 percent transportation efficiency required by ELDP guidelines.

## Conclusion

The analysis of the project's transportation efficiency demonstrates that:

- A. The project is located in a high-density, mixed-use urban infill project located near multimodal travel corridors (Third Street, 20<sup>th</sup>, and 22<sup>nd</sup> Streets, Blue Greenway) that have amenities serving transit riders, bicyclists, and pedestrians;
- B. As a result, the project site is located within an area of the City where the existing and future 2040 VMT is more than 15 percent below regional VMT values;
- C. The project provides extensive multimodal access by establishing new pedestrian, bicycle, transit, and vehicular networks on-site and improved connections to existing ones.
- D. Shuttle bus services implemented by the Project will directly connect the project site with regional transit hubs operated by BART and Caltrain;
- E. The project would generate 28 percent fewer daily vehicle trips, and 17 percent fewer vehicle trips during the a.m. peak hour, and 23 percent fewer vehicle trips during the p.m. peak hour when measured against a comparable project in a less multimodal environment with fewer TDM measures.

***(4) The project is located on an infill site, as defined in Public Resources Code section 21061.3, and in an urbanized area, as defined at Public Resources Code section 21071.***

Under PRC section 21061.3, an “infill site” is defined as a site that “has been previously developed for qualified urban uses.” A “qualified urban use,” in turn, is defined as “any residential, commercial, public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses.” An urbanized area, according to Public Resources Code section 21071, can be defined as an incorporated city that has a population of at least 100,000 persons.

The project meets the requirements of these two sections because site was previously developed as a power station, a commercial / industrial use. Further, the project is located in the City and County of San Francisco, which is an incorporated City with a population of approximately 870,000 people.

***(5) The information required by Public Resources Code section 21180(b)(1) is available for projects within a metropolitan planning organization for which a sustainable communities strategy or alternative planning strategy is in effect. For the purposes of this provision, “in effect” means that the sustainable communities strategy or the alternative planning strategy has been adopted by the metropolitan planning organization, and that the Air Resources Board has accepted the metropolitan planning organization’s determination that the sustainable communities’ strategy or alternative planning strategy meets the adopted greenhouse gas reduction targets and is not the subject of judicial challenge.***

Senate Bill (SB) 375, signed in September 2008, aligns regional transportation planning efforts, regional greenhouse gas (GHG) reduction targets, and land use and housing allocation. SB 375 requires metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or an Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO’s Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted regional GHG targets for passenger vehicles and light trucks for 2020 and 2035 for the 18 MPOs in California, including ABAG.

ABAG/MTC published the draft RTP/SCS (known as draft Plan Bay Area 2040) in 2010. On July 18, 2013, the ABAG Executive Board and MTC Commissioners adopted the final SCS and the Final Plan Bay Area 2040 was adopted on July 26, 2017. ABAG/MTC submitted the final Bay Area Plan containing the final SCS to ARB on January 6, 2014 and provided the final data table on February 18, 2014 in support of its GHG quantification determination of a 10 percent per capita carbon dioxide (CO<sub>2</sub>) emission reductions from passenger vehicles by 2020 and a 16 percent per capita reduction by 2035. On April 10, 2014, ARB reviewed the published final RTP/SCS and approved Executive Order G-14-028, which indicated that ARB accepted ABAG’s quantification of GHG emissions from the SCS. ARB determined that, if implemented, the SCS would achieve the reduction targets for the San Francisco Bay Area region in compliance with SB 375 (see Executive Order G-14-028 in **Attachment 4**).

While ABAG/MTC’s current GHG targets are per capita CO<sub>2</sub> emission reductions from passenger vehicles of 7 percent by 2020 and 15 percent per capita reduction by 2035 relative to 2005 levels, ABAG/MTC exceeded these targets by achieving 10 percent and 16 percent per capita reductions respectively. ARB is required to update the SB 375 GHG emissions reduction targets at least every 8 years and may revise them every 4 years.

***(6) Information establishing that the requirements of Public Resources Code section 21181 have been met. Written acknowledgment from the lead agency of the applicant’s intent to apply for certification may be used to satisfy this requirement.***

Written acknowledgement from the lead agency of the applicant’s intent to apply for certification regarding the intent to apply for certification was included as **Attachment 5**.

***(7) Information establishing that the project entails a minimum investment of \$100 million in California through the time of completion of construction.***

The proposed project a major development that would be one of the largest mixed-use development projects in San Francisco. Based on anticipated project costs, the proposed project or variant would exceed the minimum investment requirement of \$100 million in Public Resources Code section 21183(a). Independent of hard construction costs, the public benefits of the proposed project to the City and County of San Francisco are estimated to be approximately \$170 million in direct impact fees, including \$64 million in Transportation Fees.

***(8) Information establishing that the prevailing and living wage requirements of Public Resources Code Section 21183(b) will be satisfied.***

As required by Public Resources Code section 21183(b), all construction workers employed in the execution of the proposed project or variant will receive at least the general prevailing rate of per diem wages for the type of work and geographic area, as determined by the Director of Industrial Relations (DIR) pursuant to Sections 1773 and 1773.9 of the Labor Code.

The proposed project would create high-wage, highly skilled jobs that pay prevailing wages and living wages as required by Public Resources Code section 21183(b). The City and County of San Francisco Living Wage Ordinance is also required by San Francisco Municipal Code Section 12R. Furthermore, the City and County of San Francisco institutes a Labor Compliance Program for the purpose of implementing its policy relative to the labor compliance provisions of State and federally funded public works contracts. The State of California's Department of Industrial Relations approved the City's application for interim certification as a Labor Compliance Program, effective December 12, 2012. As a certified LCP, the City is obligated to enforce applicable Labor Code provisions and operates as a representative of the DIR in conducting investigations. This program is applicable to all public works projects that are designated as requiring prevailing wages and would be required for the proposed project or variant. The project sponsor will include this prevailing and living wage requirement in all contracts for the performance of the work. Thus, the proposed project would meet the prevailing and living wage requirement. A copy of the current Municipal Code and Labor Compliance Program are included in **Attachment 6**.

***(9) Information establishing that the project will not result in any net additional greenhouse gas emissions. This information is subject to a determination signed by the Executive Officer of the Air Resources Board that the project does not result in any net additional greenhouse gas emissions, following the procedures set forth in section 6 of these Guidelines.***

ARB recommends that documentation for the AB 900 application include baseline annual GHG emissions and the project's construction and operational annual GHG emissions, including both direct and indirect GHG emissions. In addition, ARB requests quantification of GHG emissions for multiple years to show how emissions change as a result of improvements in the vehicle fleet and energy grid.

Per discussions with ARB staff, the baseline for GHG emissions is considered to be the emissions generated from the Potrero Power Plant minus the emissions generated from the same quantity of electricity from PG&E sources. (“avoided CO2 emissions”). The subtraction of PG&E emissions is required to account for the electricity generation that shifted from the Plant to PG&E after the Plant was shut down in January 2011. Given the variation in operations of the Plant, we consider the last ten fully operational years in the analysis for baseline (2001 – 2010). Ramboll’s memorandum that discusses this concept is included as **Attachment 7**. The proposed technical methodology for quantifying the Project’s GHG emissions is attached as **Attachment 8**. It accounts for emissions impacts due to Project construction, as well as annual Project operations from 2020 through 2050. Where available, the proposed methodology uses site-specific data for construction equipment, trip rates, and energy and water use. Where site-specific data is not available, default values such as those recommended in CalEEMod have been used.

Combined construction and operational emissions are estimated at an annual minimum of 2,183 metric tons of carbon dioxide equivalents (MT CO2e) per year (in 2020) and a maximum of 24,489 MT CO2e per year (in 2034). These emissions from the Project are well below the low end estimate for avoided CO2 emissions of 146,226 MT CO2e per year.

***(10) Information documenting a binding agreement between the project proponent and the lead agency establishing the requirements set forth in Public Resources Code sections 21183(e), (f), and (g).***

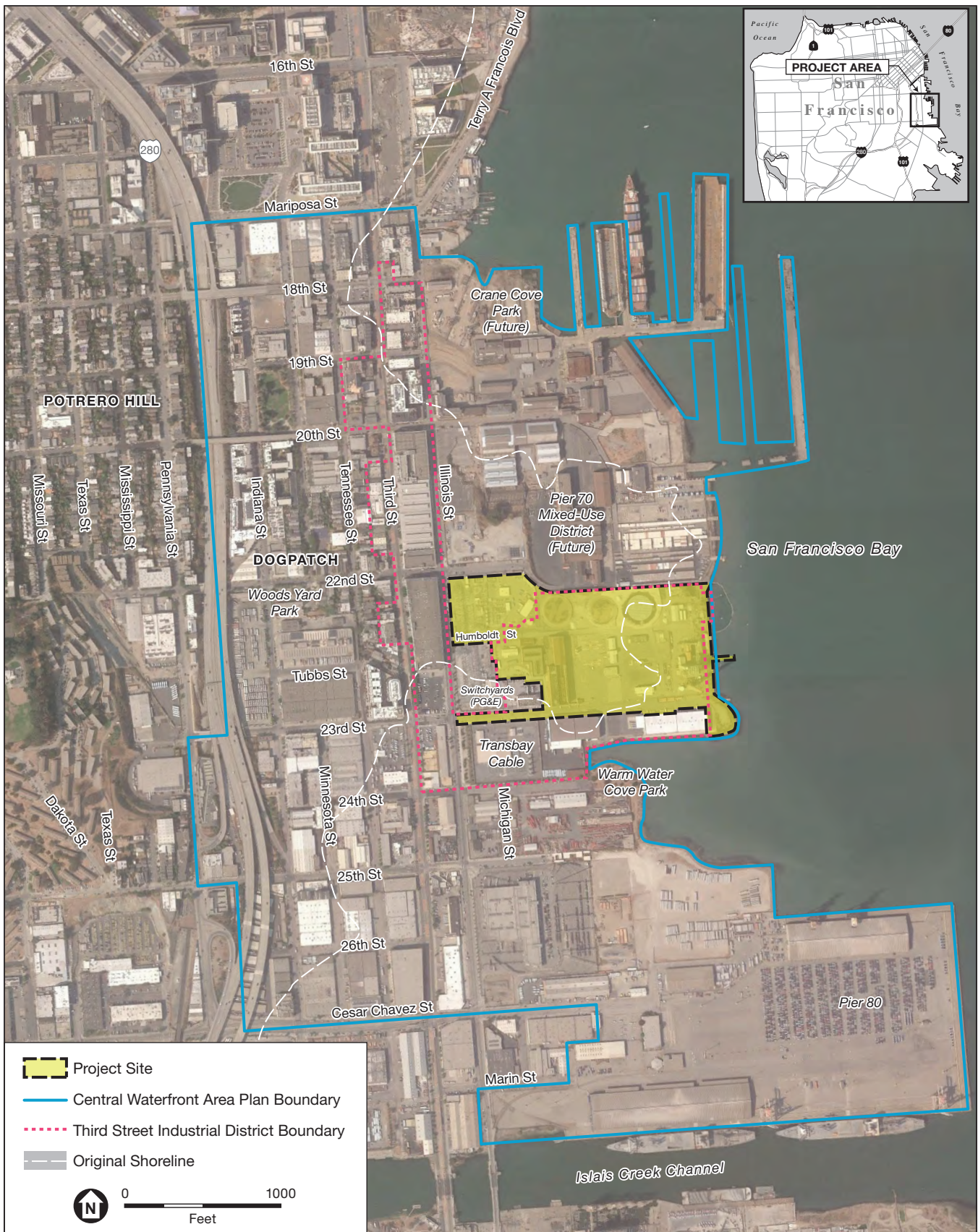
Written acknowledgement from the project sponsor regarding Public Resources Code section 21183(e), (f), and (g) is included as **Attachment 5**.

***(11) Information establishing that the project will comply with requirements for commercial and organic waste recycling in Chapters 12.8 (commencing with Public Resources Code section 42649) and 12.9 (commencing with Public Resources Code section 42649.8), as applicable.***

As required by Public Resources Codes sections 42649 and 42649.8, the project will recycle solid and organic waste generated by commercial. As required by Chapter 19, Mandatory Recycling and Composting, of the San Francisco Environmental Code, the project will also recycle solid and organic waste generated by residential uses as well. Included in **Attachment 9** is a copy of the San Francisco Environmental Code, Chapter 19, Municipal Recycling and Composting.

**ATTACHMENT 1**  
**Project Location & Land Use Plan**





SOURCE: Google Earth, 2017; ESA, 2018

Potrero Power Station Mixed-Use Development Project | AB900 Application

## ATTACHMENT 1 Project Location



SOURCE: Perkins+Will, 2018

Potrero Power Station Mixed-Use Development Project | AB900 Application

## ATTACHMENT 1

### PROPOSED LAND USE PLAN



**ATTACHMENT 2**  
Project Drawings



① Waterfront Park: Section 3.15-3.19

② Humboldt Street Plaza: Section 3.24

③ Turbine Plaza: Section 3.22

④ Stack Plaza: Section 3.21

⑤ The Point: Section 3.20

⑥ Power Station Park East: Section 3.28

⑦ Power Station Park West: Section 3.29

⑧ Louisiana Paseo: Section 3.30

⑨ Rooftop Soccer Field: Section 3.31



Potrero Power Station Mixed-Use Development Project | AB900 Application

**ATTACHMENT 2**

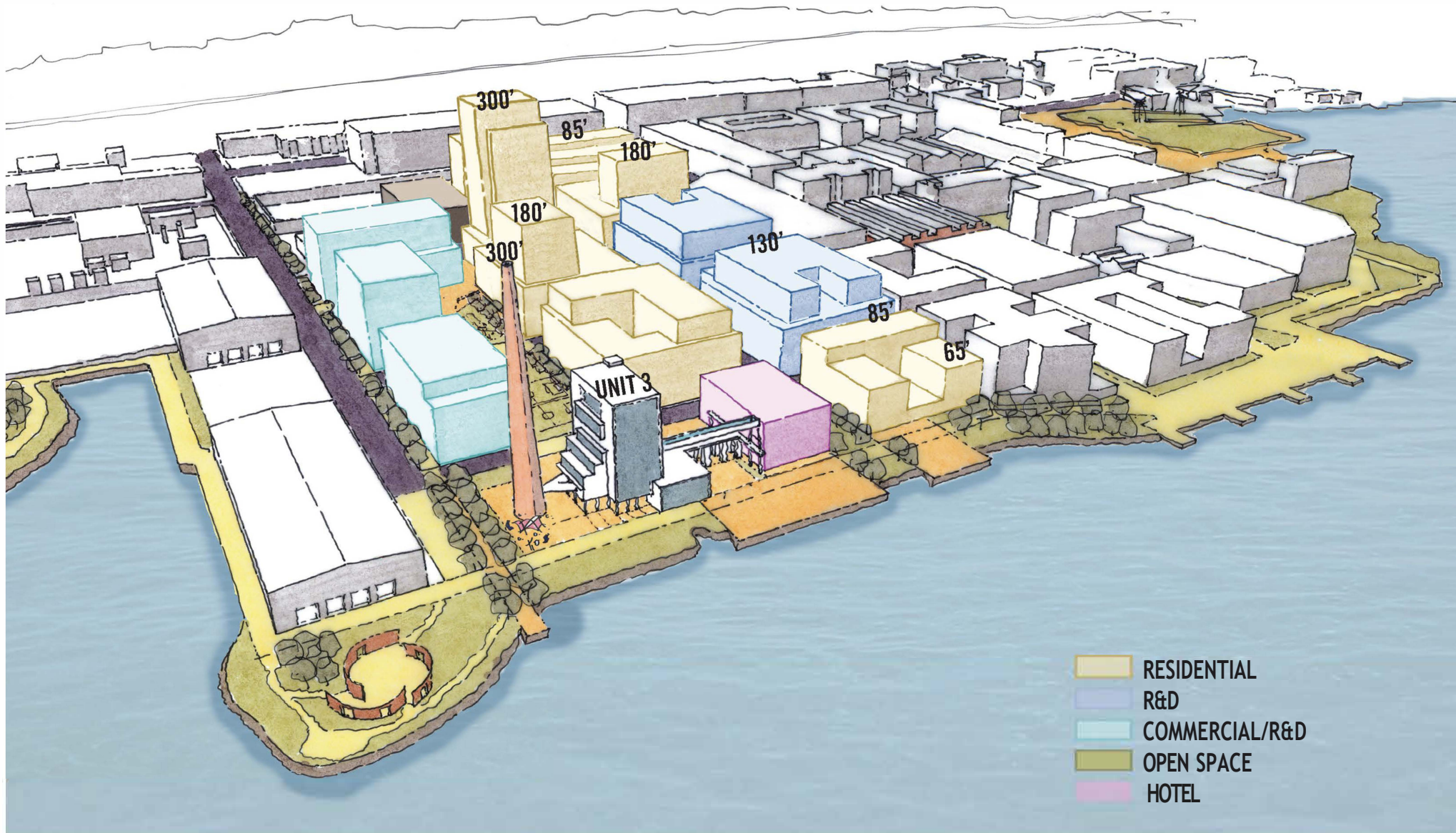
LOCATION MAP OF OPEN SPACES



Potrero Power Station Mixed-Use Development Project | AB900 Application

**ATTACHMENT 2**  
WATERFRONT OPEN SPACE CONCEPT





Potrero Power Station Mixed-Use Development Project | AB900 Application

**ATTACHMENT 2**  
PROPOSED URBAN FORM

**ATTACHMENT 3**  
**Draft TDM Plan**





# POTRERO POWER STATION TDM PLAN

Working Draft

December 2017



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**DRAFT TDM PLAN | POTRERO POWER STATION**  
Associate Capital



# 1 INTRODUCTION

The Potrero Power Station (PPS) development is located on a 28.8-acre site in San Francisco's Central Waterfront area. PPS will include a mix of uses including residential, commercial, laboratory, retail, hotel, and open space. The site benefits from proximity to the waterfront and the Dogpatch neighborhood's retail and transportation options found on Third Street, as well as a relatively flat topography and close access to downtown San Francisco.

This draft transportation demand management (TDM) plan is a living, working document aimed to initiate discussions with SF Planning and San Francisco Municipal Transit Authority (SFMTA) on PPS's progress toward committing to a range of TDM measures that will be included in a more comprehensive Transportation Plan, which is forthcoming.

## WHY TRANSPORTATION DEMAND MANAGEMENT

TDM measures in general, and those described further in this plan specifically, work together to reduce single-occupancy vehicle (SOV) trips by expanding mobility options and incentivizing the use of spatially and environmentally efficient modes. Targeted programs strengthen the benefits of investments in bicycle and pedestrian infrastructure and the site's proximity to major transit nodes by reinforcing awareness of these options, breaking down barriers to incorporating them in travel routines, and incentivizing habitual use.

This TDM Plan reaffirms PPS's commitment to sustainability and to minimizing the project's impact on traffic congestion. It encourages the site's residents, employees, and visitors to use the most environmentally friendly and spatially efficient mode possible for each trip, with an emphasis on cycling, walking, and higher capacity modes.



The urban form planned at PPS and this draft TDM Plan are consistent with City of San Francisco policies that aim to encourage the use of transit and other non-auto modes of transportation, as well as the City's efforts to manage the transportation impacts of new development. The Plan was developed using San Francisco's new TDM Ordinance as a guide, and the PPS team used the Ordinance's framework to scale the site's programs appropriately.

Many campuses have implemented TDM programs to reduce SOV travel and find the optimal balance of transportation modes to accommodate growth. Genentech implemented an aggressive TDM strategy in 2006 that included programs such as shuttle service and parking cash-out accompanied by comprehensive marketing and communications through an online employee portal. Since implementation, Genentech's drive-alone mode share has decreased by almost 30%, decreasing carbon emissions from 4.5 tons per employee to 1.9. Similarly, Stanford University's extensive TDM program, which has for years included meaningfully priced parking, transit subsidies, and incentive programs, has effected a substantial decrease in SOV commuting, from 72% in 2002 to 46% in 2011. Moreover, these programs serve campuses that grew rapidly during the periods noted, but this growth was not accompanied by substantial increases in parking. These two examples, along with many others from developments and employers across the country, attest to the power of thoughtfully crafted TDM programs.

Given these successes, robust TDM programs are becoming expected aspects of new developments in San Francisco and beyond. In early 2017, the City enacted a TDM Ordinance that requires developers to establish TDM programs scaled to the amount of parking they plan to build on-site. This ordinance reinforced existing policies that aimed to encourage the use of non-auto modes, such as the city's Transit First Policy, which was established in 1973 and amended to include pedestrians and bicyclists in 1999. New residents and office tenants also increasingly demand convenient access to quality multimodal infrastructure, and in urban areas like San Francisco, they assume that parking will be treated as a limited commodity that will be priced based on occupancy levels and market rates.

## **TDM AT POTRERO POWER STATION**

The Potrero Power Station aims to reduce SOV trips by 20% relative to expected levels,<sup>1</sup> and the robust TDM program outlined in this working document is how the project aims to reach that ambitious target. The TDM Plan was guided by the TDM Ordinance and reflects the values outlined in City policies by striving to maximize the use of travel options that are sustainable in all senses of the word.

This document includes a discussion of TDM measures and transportation investments aligned with the categories and measures included TDM Ordinance menu of measures, as well other transportation investments PPS is considering that fall outside the TDM Ordinance. The latter measures are aligned with the spirit of the TDM Ordinance and support and leverage the effects of TDM at the site and around the City.

## **A GUIDE TO THIS DOCUMENT**

Chapter 2 includes a discussion of point-generating TDM measures, as well as additional supportive strategies which do not generate points through the TDM Ordinance but are important

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<sup>1</sup> The expected number of SOV trips will be calculated in the forthcoming transportation impact assessment (TIA), to be conducted during the environmental review process.

in complementing and tying together a full set of measures. Chapter 3 describes the TDM measures' anticipated impacts toward meeting the 20% trip-reduction target.

DRAFT

## **2 PLANNED TDM MEASURES AND TRANSPORTATION STRATEGIES**

This initial TDM Plan consists of a package of measures that will work together to effect behavioral change in a way that is both cost effective and highly marketable. These measures include infrastructure improvements, incentives, and ongoing programs, many of which have been successfully implemented in other urban, mixed-use environments. These measures balance the desire to provide innovative transportation amenities with the need to maintain a cost-effective program.

Two sets of TDM measures are presented. The first set of measures are those that are included in the TDM Ordinance menu of measures. The second set consists of measures which are not identified in the TDM Ordinance but facilitate or leverage the implementation of the other strategies.

### **TDM ORDINANCE MEASURES**

The TDM measures recognized by the City through the TDM Ordinance guidance materials are organized according to the categories set forth in the guidance materials. These categories include:

- **INFO – Information Services**
- **ACTIVE – Active Transportation**
- **PKG – Parking Management and Policies**
- **HOV – High Occupancy Vehicle Measures**
- **CSHARE – Car Share and Scooter Share**
- **FAMILY – Family-Supportive Measures**
- **DELIVERY – Delivery-Supportive Measures**

Figure 9 in Chapter 3 connects these measures to documented trip-reduction effects and estimates the impact of the overall package, based on a methodology from the California Air Pollution Control Officers' Association (CAPCOA).



## TDM Ordinance Category: INFO

### Strategic Multimodal Signage/Wayfinding

- *Applies to: Residential, Office, Lab, Retail (Employees and Visitors), PDR*

Signage and wayfinding to indicate points of connection between different modes, as well as estimated travel times and directions by mode, can help increase people's understanding of their non-auto travel options (see Figure 1). Clear signage is also important for ensuring safety for all types of users and differentiating spaces for different users within shared rights of way. Signage can also indicate the nature and location of nearby bicycle routes and the location of bicycle parking.

**Potrero Power Station will design and install signage and wayfinding at key points throughout the development, including signage for safety along shared streets. Potrero Power Station will coordinate with the City on the project's overall signage and wayfinding program to ensure the project conforms to City standards.**

Figure 1 Multi-Modal Wayfinding Examples



### Real-Time Travel Information

- *Applies to: Residential, Office, Lab, Retail (Employees and Visitors), PDR*

Making such information readily available can increase residents' awareness of local transit options and can facilitate efficient trip planning and the use of non-auto modes. This measure consists of providing real-time transportation information to Potrero Power Station residents, employees, and visitors. Depending on the technologies available by the time the first phase of the project is built, information could be displayed on screens in lobbies (see Figure 2) and other high traffic areas, as well as on a potential project website and other communications channels.

**Potrero Power Station will display dynamic transit information and transportation marketing in building lobbies or use a similar approach based on state-of-the-practice technology at the time of building design.**

Figure 2 Transit Information Screen Displays



### **Transportation Welcome Packets and Ongoing Transportation Marketing Campaigns**

- ***Applies to: Residential, Office, Lab, Retail (Employees)***

A strong communication and marketing campaign is critical to the success of any TDM program, ensuring that residents, employees, and visitors receive information about relevant resources and incentives at appropriate times and through channels that are easily accessible. Incorporating consistent branding into all communications can help create a sense of place and establish a cohesive identity for the transportation program. Branding can be used to emphasize that residents, employees, and visitors can travel seamlessly through the area.

The Potrero Power Station will develop a cohesive marketing effort to promote all transportation options at the site, including biking, walking, public transit, and driving/parking. As part of a site-wide marketing campaign, Potrero Power Station will develop transportation welcome packets to inform new residents and employees of the range of transportation options available to them. These packets will likely include up-to-date information on local and regional transit services (including maps, schedules and fares) and where transit passes can be purchased, bicycle way maps, and nearby car share locations, in addition to other relevant travel information. They could also include sources for additional web-based transportation materials (e.g., 511.org, NextBus, and the San Francisco Municipal Transportation Agency website). Finally, the packets could include up-to-date information on the range of transportation benefits available, including any relevant details on how to take advantage of these benefits. This strategy will ensure that a lack of knowledge is not a barrier to choosing non-driving modes.

**As part of a broader transportation marketing campaign, Potrero Power Station will provide new residents and employees with a transportation welcome packet upon move-in or upon starting work at the site. These informational packets will be continuously updated as local transportation options change. The site's transportation staff will also engage in ongoing efforts to provide information on and market the use of non-auto modes.**

## TDM Ordinance Category: ACTIVE

### Improved Walking Connections

- *Applies to: Residential, Office, Lab, and Retail (Employees and Visitors)*

High quality street design can greatly improve overall walking conditions, enhance access to transit, and facilitate safer and more convenient pedestrian and bicycle connections. A pedestrian-oriented urban design is essential for residents, employees, and visitors to fully take advantage of all available transportation options and programs throughout a site and nearby.

Potrero Power Station's street cross sections are being developed with state-of-the-practice street design principles in mind. Streets within the development will comply with Better Streets Plan standards, and the design of complex rights of way like 23<sup>rd</sup> Street will be developed using state-of-the-practice urban street design guidelines from the National Association of City Transportation Officers (NACTO) (see an example of a street designed using NACTO guidelines in Figure 3). The project is also committed to continuing the Blue Greenway pedestrian and bicycle trail through the site, along the Bayfront and 23<sup>rd</sup> Street. These improvements will help shape the overall neighborhood environment and enable other TDM measures to succeed.

**Potrero Power Station will design streets to be safe and comfortable for non-motorized users with features including wide sidewalks, clear crossings, and high quality bicycle infrastructure. The design of streets will comply with the Better Streets Plan and best practices included in the NACTO Urban Street Design Guide.**

Figure 3 Complete Streets Design Features



Source: NY DOT

### Bicycle Parking in Compliance with Code Requirements

- *Applies to: Residential, Office, Lab, Retail (Employees and Visitors), PDR*



Safe and convenient bicycle parking is a key ingredient for creating a bicycle friendly environment. PPS intends to provide bicycle parking space at the code-required amount. There are several methods of providing secure (Class I) bicycle parking spaces for residents and employees. Bicycle rooms or cages can be placed at convenient locations within buildings or in nearby public spaces, and bicycle owners who qualify can receive a key or access card to use the space (often the same card used to access an elevator or parking garage). Supportive amenities such as showers and lockers will also be provided for use by employees.

On-street Class II bicycle racks in highly visible locations will also be provided to facilitate short-term bicycle parking. Bicycle racks should be easy to use and located in the most visible and convenient parts of the building frontage (near building entrances and retail store entrances). Public bicycle parking is often considered secure when it is situated in well-lit, highly visible areas.

Bicycle parking facilities will also accommodate a limited number of non-standard types of bicycles including those with cargo and trailer attachments.

**Potrero Power Station will include the code-required Class I bicycle parking spaces and Class II short-term use bicycle parking spaces and will work with vertical developers to set aside necessary square footage for secure bicycle parking in convenient areas of each building.**

### **Showers and Lockers for Employees**

- ***Applies to: Office, Lab, Retail (Employees)***

Showers and lockers located near bicycle rooms can allow those who have to bicycle longer distances to rinse off and change from clothing suitable for cycling to work attire, eliminating one potential barrier to cycling to work. As such, the development will provide showers and lockers for office and retail employees in amounts required by the San Francisco Zoning Code.

**Potrero Power Station will install showers and lockers in or near each bicycle room located in commercial buildings.**

### **Bicycle Repair Stations**

- ***Applies to: Residential, Office, Lab, Retail (Employees)***

Maintenance can be a key barrier to using a bicycle as a primary transportation mode. Fix-it stations can address this barrier by providing a work bench, fix-it pole (to allow bicycles to be hoisted off the ground for easier access), bicycle tools, and a vending machine for commonly needed bicycle parts (i.e. chains and bicycle lights). These fix-it stations can also be equipped with up-to-date bicycle maps, information on bicycle-related programming on-site or nearby, and other information for cyclists.

**Potrero Power Station will install bicycle fix-it stations in each bicycle room throughout the site and will equip stations with a work bench, fix-it pole, tools, and bicycle-related information.**



Figure 4 DERO Bicycle Fix-it Station



Source: DERO

## Bicycle Maintenance Services

- ***Applies to: Residential, Office, Lab, Retail (Employees)***

To ensure that brakes, chains, cables, and tires stay effective over time, many bicycle owners bring their bicycles in for an annual tune-up at a bicycle shop. Covering the cost of an annual tune-up can address a potential barrier to bicycle commuting. In keeping with its commitment to make the Potrero Power Station site bicycle-friendly, the site will cover the cost of an annual bicycle tune-up for on-site employees. Per the SF TDM Ordinance, the property owner will offer bicycle maintenance services to each employee, at least once annually, for 40 years, or to cover 100% of the cost of a basic tune-up<sup>2</sup> over the same time period at a local bike shop.

**Potrero Power Station will provide each of the on-site employees a free bicycle tune-up annually, either through on-site bicycle maintenance services or through a partnership with a local bicycle shop.**

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<sup>2</sup> Per Appendix A (TDM Measures) of the TDM Program Standards (v2, 2/17/17, page 27), a "basic tune-up" is defined as: "Inspection and adjustment of brakes, derailleur/shifting mechanism, and cables, and chain cleaning and inspection for wear and tear on all bicycle components. The cost of a basic tune-up shall be estimated in consultation with local bicycle repair shops."

## TDM Ordinance category: PKG

### Unbundle Parking

- *Applies to: Residential, Office, Lab, Retail (Employees)*

“Unbundling” parking means that the cost of parking is separate from the cost of residential and commercial units. It is an increasingly common practice in urban areas, and the City of San Francisco requires residential developments to unbundle parking.

Unbundling parking costs changes parking from a required purchase to an optional amenity, so that households can choose how many spaces they wish to lease or purchase. This approach provides a cost savings to households who decide to dispense with one of their cars, and it can help attract households who wish to live in a transit-oriented neighborhood where it is possible to live well with only one car, or even no car, per household. Thirty percent of San Francisco households do not own a vehicle.<sup>3</sup>

For this measure to work optimally for office users, the users of parking – not their building managers or employers – must be the ones who ultimately pay daily or monthly costs.

**Potrero Power Station will unbundle parking costs from all leases and sales and ensure that the users of parking are the ones who ultimately pay for it.**

### Minimize Parking Supply

- *Applies to: Residential, Office, Lab, and Retail (Employees and Visitors)*

Building excessive parking leads to increased automobile use, contributing to more vehicle trips, increased traffic congestion, higher housing costs, and greater greenhouse gas emissions. Given the large number of households with no vehicle and the demand for housing in San Francisco, a limited supply of parking could be expected to attract a high proportion of residents without vehicles, which in turn should result in fewer vehicle trips from the development. The project site will be directly served by high-quality transit and is in a neighborhood that is already facing vehicular congestion, which further discourages driving and parking.

**Potrero Power Station will establish maximum parking ratios that are lower than the neighborhood average for residential uses.**

Specifically, Associate Capital has committed to parking ratios consistent with the adjacent Pier 70 development, which are:<sup>4</sup>

- Residential: 0.6 spaces per unit
- Office, Lab, and PDR: One space per 1,500 square feet of gross floor area (GFA)
- Grocery: Three spaces per 1,000 square feet of GFA
- Other Retail: Zero parking spaces

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<sup>3</sup> U.S. Census, American Community Survey 2013, five-year estimates

<sup>4</sup> As reported by San Francisco Municipal Transportation Agency staff in September 2017.

## TDM Ordinance Category: HOV

### Multi-Modal Transportation Subsidy

- *Applies to: Residential, Office, Lab, and Retail (Employees)*

Providing a monthly subsidy for using non-driving modes can be an effective way to promote public transit, walking, biking, and shared rides.

**Site management staff will provide a monthly transportation subsidy equal to 25% of a Muni "M" pass (covering all Muni and BART trips within San Francisco) for residents (one per dwelling unit) and employees (one per employee).**

These subsidies would be provided in the form of a flexible spending account that could be used for fares on any transit agency or membership to Ford GoBike, a car- or scooter share service, or any other services deemed eligible by the site management. The purpose of this subsidy is to make a range of travel options more attractive to enable residents and workers to avoid bringing a private vehicle to the site. The flexible subsidy would enable them to use the mode that makes the most sense for any given trip. This subsidy would be available only to residents who do not purchase a parking permit on-site. If the site limits employees to hourly/daily parking pricing, per the potential measure in the PKG category, it would either need to implement this in concert with a trip-tracking platform that can ensure that employees receiving the subsidy do not use parking, or the site would need to offer the travel subsidy to all employees.

### Shuttle Bus Service

- *Applies to: Residential, Office, Lab, Retail (Employees and Visitors), PDR*

Providing shuttle service to nearby regional transit hubs can reduce a barrier to commuting by transit. Pier 70's project sponsors plan to provide two shuttle routes – one providing east-west service between the site and the 16<sup>th</sup> Street BART station, and one providing north-south service to SoMa and Downtown San Francisco via Third Street. The Pier 70 Transportation Plan describes a service that would run every 15 minutes during weekday peak periods only.

**PPS aims to provide shuttle connections to 16<sup>th</sup> Street BART and the 4<sup>th</sup> and King Caltrain terminal at service levels consistent with the service that will be provided at Pier 70.**

SFMTA is planning new Muni service (temporarily called the "XX") that would parallel the east-west route, and the agency is planning significant service increases on the T-Third over the long term that would obviate the need for supplemental north-south service. The project team's intent is to provide sufficient service to meet the needs of PPS residents, employees, and visitors. However, the team aims to supplement SFMTA service, not replicate it. As such, PPS aims to support the supplementary shuttle services until SFMTA's planned service on the XX and T-Third are fully implemented.

## TDM Ordinance Category: CSHARE

### On-Site Car and Scooter Share Parking

- *Applies to: Residential, Office, Lab, Retail (Employees and Visitors), PDR*

Allowing residents, workers, and visitors to rent cars or scooters on-site can make it easy for people who do not have a car (or who have a limited number of cars per household) to have access to a vehicle when needed (e.g. to run errands that require hauling heavier items). Potrero Power Station will provide both car-share and scooter-share spaces in convenient locations on-site. Spaces will be located in high-visibility parking spots within publicly-accessible parking facilities, with clear exterior signage to increase visibility and emphasize the convenience of car share.

Potrero Power Station will reserve the maximum number of parking spaces called out in the San Francisco TDM Ordinance (50) for car share parking, to be made available to any car share company that wants to locate a vehicle on the site. The number of vehicles that the companies actually provide and the mix of companies might depend on the market penetration of different car share services and/or might change over time based on resident or employee preferences. Per the San Francisco TDM Ordinance, up to 15% of car share spaces that are provided above and beyond the San Francisco Planning Code requirements may be substituted with spaces for another shared vehicle type, such as scooters.

**Potrero Power Station will make a maximum of 50 designated car-share spaces available to car share companies, free of charge (car share companies would be responsible for the cost of any vehicle-related infrastructure, including electric vehicle or scooter charging stations). Some of these spaces may be set aside as scooter-share spaces.**

Figure 5 Scoot Scooter-Share and Zipcar Car-Share



Source (Top Left): Flickr, Marcin Wichary

## TDM Ordinance Category: FAMILY

### Garage Storage Space for Car Seats, Strollers, and Cargo Bicycles

- ***Applies to: Residential***

Storing car seats, strollers, and cargo bicycles can require significant space and may be difficult to accommodate within residential units. Car seats are typically stored in a family car, and providing secure space for such items can reduce a small barrier to getting rid of a car or using car-share for vehicle trips. Safe storage space for strollers and cargo bicycles can make it more practice for families with young children to use a range of alternatives to driving.

**Potrero Power Station will provide a secure and easily accessible place to store bulky items such as car seats, strollers and cargo bicycles to better facilitate travelling with children.**

### **On-Site Child Care**

- ***Applies to: Residential, Office, Lab, and Retail (Employees)***

Providing child care services on-site can help minimize a key barrier for parents to taking non-auto modes to work. In doing so, it can reduce travel needs for both residents and employees by eliminating an extra round trip to a separate childcare destination. The site will work to identify an on-site child care provider and work with them to design a facility consistent with best practices.

**The Potrero Power Station will work to ensure that a child care provider locates on-site in an area that is convenient to both residents and workers.**

## **TDM Ordinance Category: DELIVERY**

### **Cold/Dry Storage for Grocery and Package Delivery**

- ***Applies to: Residential***

Providing storage space for perishable groceries can have a direct effect on reducing trips by encouraging and facilitating online ordering. Where this type of measure has been implemented without direct staff monitoring at all times, building residents typically access deliveries through a locker system with unique pick-up codes that include the locker number and access times for the delivery recipient. Regardless, providing some kind of secure place for delivery storage can allow residents and employees to confidently arrange for deliveries, even if they may not be able to pick items up right when delivered or get them to their own refrigerator or pantry immediately.

**Potrero Power Station will provide in-building lockers that are refrigerated and/or allow for dry storage of sensitive or perishable deliveries. As online shopping continues to grow, technologies will likely evolve and the site will aim to implement a system that is consistent with general market preferences at the time of building design.**

## ADDITIONAL TDM AND TRANSPORTATION STRATEGIES

In addition to the TDM measures described in the last section, PPS plans to make further important investments in transportation infrastructure and programs in the spirit of encouraging the use of non-auto modes. This extensive set of investments aims to improve transportation networks within the site and beyond through urban design, infrastructure, financial contributions, and other supportive efforts.

While not included in the City's TDM Ordinance menu of measures, the additional measures shown in Figure 6 will also facilitate successful implementation of the full transportation program, tying program areas together and ensuring critical pieces of infrastructure exist to support use of other on-site transportation programs. For example, provision of transit layover facilities is essential to maximizing the impact of a multimodal transit subsidy, much like high quality bicycle routes are key to encouraging enough site users to consider cycling a primary travel option and, in turn, make full use of on-site bicycle parking.

Figure 6 Additional Transportation Strategies

Strategy Area	Additional Transportation Strategies	Related TDM Measures
Program Management and Implementation	Hiring of a transportation manager (and additional staff as necessary)	<ul style="list-style-type: none"> <li>Strategic Multimodal Signage/Wayfinding</li> <li>Real-time Travel Information</li> <li>Transportation Welcome Packets and Ongoing Transportation Marketing Campaign</li> </ul>
	Creation of a "transportation café"	
	Provision of fresh food-related shops, vendors, and events at the site	
Transit	Provision of layover space and operational needs for the Muni XX route on 23 <sup>rd</sup> Street	<ul style="list-style-type: none"> <li>Shuttle Bus Service</li> <li>Multimodal Transportation Subsidy</li> </ul>
	Required Transportation Sustainability Fee	
Bicycle	Investment in completing the Blue Greenway through the site	<ul style="list-style-type: none"> <li>Bicycle Parking</li> <li>Bicycle Repair Station and Maintenance Services</li> <li>Showers and Lockers for Employees</li> <li>Improved Walking Conditions</li> </ul>
	Traffic-calmed interior roadways	
	Space allocated for Ford GoBike dock(s) or comparable program on site	
Loading	Ample curb frontage allocated to passenger and commercial loading	<ul style="list-style-type: none"> <li>Multimodal Transportation Subsidy</li> <li>Minimize Parking Supply</li> <li>Cold/Dry Storage for Grocery/Package Delivery</li> </ul>
	Designation of ride-hail waiting areas in building lobbies, as well as a partnership with technology-network companies (e.g., Lyft, Uber) to encourage the use of their space-efficient fare-splitting services (e.g. Lyft Line, UberPool)	
Land Use	The project will include affordable housing (percentages and income levels are to-be-determined).	



## **Transportation Program Manager**

An on-site transportation program manager, as well as additional staff as necessary, is crucial to the successful implementation and oversight of the PPS TDM program. This person would manage the roll-out of all programs, including managing vendors and engaging with new site residents and tenants to introduce them to the site's transportation offerings through welcome packets and other digital or online materials. Though hiring for this role is not included in the TDM Ordinance, it is an essential function for maximizing the impact of investment in other transportation programs.

## **Transportation Café**

An on-site transportation café is envisioned as an amenity where site residents, workers, and guests can not only grab a coffee or a bite to eat but also get information on all of the site's transportation offerings. The café is envisioned in a retail location near the terminal stop of the Muni "XX" line, and it would be the home base of the site's transportation staff and a place to pick up transportation-related merchandise and products like transit passes. It would also have bicycle parking, indoor and outdoor seating, and access to on-site amenities such as bike storage and fix-it stations. The Bicycle Café could also be a location for programming and events that builds community around transportation. Strategies such as real-time travel information and perhaps a kiosk with transit and bike share information would also be available here. Mirroring other transit or bicycle-themed cafes throughout the Bay Area, this transportation café can be a gathering space for the PPS community.

Figure 7 Luckyduck Bicycle Café, Oakland, CA



## **Bike Share Docks**

PPS plans to make adequate space available for Ford GoBike dock(s) (or infrastructure for a comparable bicycle share provider pending the bicycle share options available over time) at the site. Space for the docks will be allocated in high-traffic areas near key buildings and site entrances, facilitating easy and convenient use of the bike share system. This will serve to further reinforce the site's multimodal brand.

**Figure 8** Ford GoBike Dock



### **Affordable Housing**

Residents living in affordable housing typically own fewer cars per household than residents of market-rate units. While the site is committed to including some affordable housing in the project, the exact amount and the income-level breakdowns are still being determined.

### 3 ESTIMATED TRIP REDUCTION IMPACTS

PPS has committed to reducing trips generated by its site by 20% in part through the implementation of the transportation and TDM measures described earlier in this document. According to industry research on the effectiveness of the TDM measures included in this plan, the project should achieve this goal.

#### Estimation Methodology

The project team estimated the potential impact of the package of TDM measures using a widely used estimation approach published by the California Air Pollution Control Officers Association (CAPCOA). The CAPCOA approach is rooted in an extensive literature review on the effectiveness of TDM and other greenhouse gas-reduction strategies, and an accompanying manual provides clear guidance on the assumptions and limitations of each measure.<sup>5</sup>

The research indicates that parking management and pricing is one of the strongest trip reduction mechanisms, even in the absence of a robust set of supporting TDM strategies. This may be due in part to the fact that parking-associated travel behavior is measured more easily than other strategies whose impacts may be more dispersed.

Figure 9 summarizes the estimated impact of key TDM measures included in the Strategy in the context of the broader potential ranges of impact included in the CAPCOA report. The measures included in the table are the ones that are expected to generate notable levels of trip-reduction. Other strategies can be considered supportive of these measures. As some of these strategies are only applicable to certain site users, such as residents, employees, and/or visitors, the strategies' impacts vary depending on the land use type. The table indicates the range of each strategy's expected impact on trips generated by the primary land use types.

#### Calculating a Site-Wide Trip Reduction Estimate

TDM measures and the trip-reduction effects associated with them are not additive but rather complementary and synergistic. Moreover, when additional measures are implemented, the marginal benefit of each new program diminishes; this means that if a site implements 11 measures, with each estimated to reduce trip-making by 10%, one would not expect a 110% overall reduction in trip-making. To prevent this kind of result, the CAPCOA methodology

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<sup>5</sup> California Air Pollution Control Officers Association (CAPCOA). *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emissions Reductions from Greenhouse Gas Mitigation Measures*. August 2010. Retrieved October 2017 from <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>.

includes maximum reduction levels associated with each category of strategies, based on existing research. For example, parking policy and pricing strategies can achieve a maximum reduction of 20%. This is separate from the impact of other TDM strategies, which can achieve a combined maximum reduction of 15%.

In general, the calculation is as follows<sup>6</sup>:

$$\text{Trip Reduction Estimate} = 1 - (1 - \text{Parking Reduction}) * (1 - \text{Other TDM Reduction})$$

The two trip reduction components are calculated in a similar way. For instance:

$$\begin{aligned} \text{Parking Reduction Estimate} \\ = 1 - (1 - \text{Strategy \#1 Reduction}) * (1 - \text{Strategy \#2 Reduction}) * \dots \end{aligned}$$

Although the difference between this approach and a simple additive method is small, it has larger implications as the scale of the project increases. In addition, implementation of these strategies is often staggered, complicating the estimation of when these trip reduction strategies fully take effect.

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<sup>6</sup> For further explanation of the other variable involved in trip reduction calculations, please refer to Chart 6-2 of the CAPCOA Quantifying Greenhouse Gas Mitigation Measures Handbook, August 2010.



Figure 9 Trip Reduction Estimation

CAPCOA Category	CAPCOA Measure Name	Associated PPS Measures	CAPCOA Range and Rationale	Trip Reduction Percentage		
				Residential	Office/Lab	Retail
Commute Trip Reduction	Implement Commute Trip Reduction Marketing (TRT-7)	<ul style="list-style-type: none"><li>INFO-1: Strategic Multi-modal Signage/Wayfinding</li><li>INFO-2: Real-time travel information</li><li>INFO-3: Welcome Packets for New Residents/Employees and Basic Ongoing Marketing</li><li><i>Additional Strategy: Hiring Transportation Manager (and additional staff as necessary)</i></li><li><i>Additional Strategy: Transportation Café</i></li></ul>	CAPCOA estimates 0.8-4% trip reduction based on the percentage of people utilizing these resources. PPS's TDM Plan includes robust general multimodal marketing and transportation information provided multiple sources of information including a website, all coordinated by an on-site Mobility Manager. However, PPS is not planning to implement tailored one-on-one transportation counseling. The potential trip-reduction is therefore estimated to toward the higher end of the range but not at the top of the range.	3%	3%	1.5%
	Implement Commute Trip Reduction Program – Voluntary (TRT-1)	<ul style="list-style-type: none"><li>ACTIVE-5A: Bicycle Fix-it Station</li><li>ACTIVE-5B: Bicycle Maintenance Services</li><li>ACTIVE-3: Showers and Lockers for Employees</li><li>ACTIVE-2, Option A: Bicycle Parking: Code-Required Amounts</li><li><i>Additional Strategy: On-Site Space for Ford GoBike or Comparable Program</i></li></ul>	CAPCOA estimates 1-6.2% trip reduction for voluntary commute trip reduction programs including carpooling, ride-matching, vanpool, and bicycle end-of-trip facilities. Of those programs, PPS will invest in bicycle end-of-trip facilities and services. Because these are only a portion of the programs in this category, the impact is expected to be on the low end of the potential range.	1%	2%	1%
	Implement Subsidized or Discounted Transit Program (TRT-4)	<ul style="list-style-type: none"><li>HOV-1: Transit / Multi-Modal Subsidy</li></ul>	CAPCOA estimates 0.3-20% trip reduction for subsidized transit programs. PPS is considering a monthly subsidy of 25% of the cost of a Muni pass for each household and each employee. Given that there are already many subtle incentives to take transit in San Francisco (e.g. a highly connective network of frequent transit lines and limited and expensive parking at key destinations), the incremental trip-reduction effect of this transit subsidy cannot be expected to produce a trip-reduction effect at the top of the range. Given that site users would still need to cover some of the cost of a transit pass, we assume a trip-reduction effect below the middle of the range.	3.75%	3.75%	0%
	Provide Employer-Sponsored Vanpool/Shuttle (TRT-11)	<ul style="list-style-type: none"><li>HOV-2: Shuttle Bus Service</li><li><i>Additional Strategy: Stop and Layover Space for Muni XX</i></li><li><i>Additional Strategy: Required Transportation Sustainability Fee Contribution</i></li></ul>	CAPCOA estimates 0.3-13.4% trip reduction for shuttle service, but the strength of the effect is based on service frequency and land use context. Given anticipated headways (15 minutes during peak periods only, which is less frequent than the highest quality transit services in San Francisco) and the plethora of other transportation services and options available in the area, the estimated impact of the PPS shuttle program can be expected to be in the low to moderate portion of the range.	5%	5%	2.5%
	Implement Car-Sharing Program (TRT-9)	<ul style="list-style-type: none"><li>CSHARE-1: On-site Car and Scooter Share Parking</li></ul>	CAPCOA estimates 0.4-0.7% trip reduction for car share programs. While dedicated car share and scooter share spaces will be made available, the program does not include a dedicated financial subsidy. Therefore, we expect trip reduction to be at the low end of the range.	0.4%	0.4%	0.2%
Parking Policy / Pricing	Limit Parking Supply (PDT-1)	<ul style="list-style-type: none"><li>PKG-4: Minimize Parking Supply</li></ul>	CAPCOA estimates 5-12.5% trip reduction from this measure, and the strength of the effect is based on the extent to which parking is reduced as well as the surrounding site context and available transportation options. Planned parking ratios are below those in the surrounding area. As such, we expect trip-reduction slightly below the midpoint of the range.	7.5%	7.5%	7.5%
	Unbundle Parking Costs from Property Cost (PDT-2)	<ul style="list-style-type: none"><li>PKG-1: Unbundle Parking</li></ul>	CAPCOA estimates 2.6-13% trip reduction from this measure. While the Potrero Power Station is unbundling all of its parking and will be charging market rates, general expectations among San Francisco residents and employees is that a separate parking fee will be incurred. Given this environment, unbundled parking at PPS is not anticipated to strongly affect decision-making, thus the potential trip-reduction impact of this strategy is estimated to be moderate.	5%	5%	0%

CAPCOA Category	CAPCOA Measure Name	Associated PPS Measures	CAPCOA Range and Rationale	Trip Reduction Percentage		
				Residential	Office/Lab	Retail
Neighborhood / Site Enhancement	Provide Pedestrian Network Improvements (SDT-1)	<ul style="list-style-type: none"><li>ACTIVE-1: Improved Walking Connections</li><li>Additional Strategy: Investment in Completing Blue Greenway Through the Site</li></ul>	CAPCOA estimates 0-2% trip reduction, with the extent of the effect based on level of network improvements.  This project will implement excellent pedestrian network improvements, including build-out of a protected walking trail along the waterfront and Better Streets Plan-compliant (or better) facilities throughout the site, including along access routes to transit stops and other amenities. The total impact is therefore anticipated to be high.	2%	2%	2%
Not Represented in CAPCOA Methodology	N/A	<ul style="list-style-type: none"><li>FAMILY-1: Garage Storage Space for Car Seats, Strollers, and Cargo Bicycles</li><li>FAMILY-2: On-Site Child Care</li><li>DELIVERY-1: Cold/Dry Storage for Grocery and Package Delivery</li><li>Additional Strategy: Provision of Fresh-Food-Related Shops, Vendors, and Events On-Site</li><li>Additional Strategy: Ample Curb Frontage for Passenger and Commercial Loading</li><li>Additional Strategy: Ride Hail Waiting Areas and Encourage the Use of Fare-Splitting Services</li><li>Additional Strategy: Affordable Housing</li></ul>	These measures are not included in the CAPCOA methodology but can generally be considered to strengthen the effect of other TDM measures. For purposes of this calculation, we have not assumed any quantitative impact for these measures.	N/A	N/A	N/A
TOTALS			Total Estimated Trip Reduction By Land Use Type	21%	22%	12%



## **ATTACHMENT 4**

**ARB Acceptance of GHG Quantification Determination for Plan Bay Area**

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER G-14-028

Association of Bay Area Governments' (ABAG) and  
Metropolitan Transportation Commission's (MTC)  
Sustainable Communities Strategy (SCS)  
ARB Acceptance of GHG Quantification Determination

WHEREAS, the Sustainable Communities and Climate Protection Act of 2008 ((Chap. 728, Stats. 2008) Senate Bill 375, or SB 375, as amended) requires each California Metropolitan Planning Organization (MPO), as part of its Regional Transportation Plan (RTP) planning process, to develop a Sustainable Communities Strategy (SCS) or an Alternative Planning Strategy (APS) that meets regional greenhouse gas (GHG) emission reduction targets (targets) set by the Air Resources Board (ARB or Board);

WHEREAS, SB 375 also recognizes ARB's target-setting responsibility as a recurring process, requiring ARB to update the targets every eight years and permitting target updates every four years;

WHEREAS, on September 23, 2010, the Board set targets for the ABAG/MTC region of 7 percent per capita reduction from 2005 by 2020, and 15 percent per capita reduction from 2005 by 2035;

WHEREAS, in March 2013, ABAG/MTC published a draft Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), known as Plan Bay Area, for 2040 that stated it would achieve the region's GHG targets with a 10 percent per capita reduction from 2005 by 2020 and a 16 percent per capita reduction from 2005 by 2035;

WHEREAS, ARB staff performed a technical evaluation of the SCS in the draft Plan Bay Area based on ARB's technical methodology for evaluating an SCS (published in July 2011);

WHEREAS, ARB staff's evaluation showed that ABAG/MTC used technical methodologies that would accurately quantify GHG reductions from the SCS in the draft Plan Bay Area;

WHEREAS, ARB staff evaluated key performance indicators that support ABAG/MTC's determination that the SCS in the draft Plan Bay Area would achieve the region's GHG targets;

WHEREAS, ARB staff's evaluation showed that ABAG/MTC's SCS in the draft Plan Bay Area, if implemented, would meet the GHG targets that the Board established for the region for 2020 and 2035;

WHEREAS, ARB staff presented an informational item on ABAG/MTC's SCS to the Board at its June 27, 2013 public meeting;

WHEREAS, during the public discussion of this item at its June 2013 meeting, the Board acknowledged that several of Plan Bay Area's Climate Policy Initiatives will provide useful data for future analysis;

WHEREAS, in response to comments from the public, stakeholders, ABAG Executive Board members, and MTC Commissioners, ABAG/MTC staff made minor modifications to the draft Plan Bay Area which did not significantly change the GHG emission reduction results;

WHEREAS, these proposed changes were presented at public meetings held by ABAG/MTC on June 14, 2013 and July 12, 2013;

WHEREAS, the ABAG Executive Board and MTC Commissioners adopted the final Plan Bay Area as revised at its public meeting on July 18, 2013;

WHEREAS, ABAG/MTC submitted the final Plan Bay Area containing the final SCS to ARB on January 6, 2014 and provided the final data table on February 18, 2014 in support of its GHG quantification determination of a 10 percent per capita reduction by 2020 and a 16 percent per capita reduction by 2035, as required by California Government Code section 65080(b)(2)(J)(ii);

WHEREAS, ARB staff reviewed both the draft SCS and subsequent modifications to the SCS contained in the adopted 2013-2040 Plan Bay Area;

WHEREAS, the modifications adopted by the ABAG Executive Board and MTC Commissioners as part of the final Plan Bay Area are minor, and do not change the underlying technical land use and transportation assumptions of the SCS or its GHG quantification methodology, and does not significantly change the GHG reduction results demonstrated by the draft SCS for 2020 and 2035;

WHEREAS, ARB staff's technical review of ABAG/MTC's GHG reduction quantification is contained in Attachment A, "Technical Evaluation of Greenhouse Gas Emissions Reduction Quantification for the Association of Bay Area Governments' and Metropolitan Transportation Commission's SB 375 Sustainable Communities Strategy" dated April 2014;


WHEREAS, section 65080(b)(2)(J)(ii) of the California Government Code calls for ARB to accept or reject the MPO's determination that the strategy submitted would, if implemented, achieve the GHG emission reduction targets established by the Board;

WHEREAS, the California Health and Safety Code sections 39515 and 39516 delegate to the Board's Executive Officer the authority to act on behalf of the Board in this manner;

NOW, THEREFORE, BE IT RESOLVED that pursuant to section 65080(b)(2)(J)(ii) of the California Government Code, the Executive Officer hereby accepts ABAG/MTC's quantification of GHG emissions reductions from the final SCS adopted by the ABAG Executive Board and MTC Commissioners on July 18, 2013, and the MPO's determination that the SCS would, if implemented, achieve the 2020 and 2035 GHG emission reduction targets established by ARB.

NOW, THEREFORE, IT IS ORDERED that ARB staff is directed to forward this executive order to the ABAG Executive Board, the MTC Commission, and the ABAG and MTC Executive Directors.

Executed at Sacramento, California, this 10<sup>th</sup> day of April 2014.

  
Richard W. Corey  
Executive Officer

Attachment A:

"Technical Evaluation of Greenhouse Gas Emissions Reduction Quantification for the Association of Bay Area Governments' and Metropolitan Transportation Commission's SB 375 Sustainable Communities Strategy" April 2014

**ATTACHMENT 5**  
**Project Sponsor Letter**

June 20, 2018

John S. Rahaim, Planning Director  
San Francisco Planning Department  
1650 Mission Street, Suite 400  
San Francisco, CA 94103-2479

Re: Potrero Power Station Mixed-Use Project: Acknowledgment of Obligations under Public Resources Code Sections 21183(d), (e), and (f)

Dear Director Rahaim:

As you are aware, California Barrel Company, LLC, ("Applicant") has applied to the Governor of California to request certification of the Potrero Power Station Mixed-Use Project (the "Project") as a Leadership Project subjected to streamlined environmental review pursuant to the Jobs and Economic Improvement through Environmental Leadership Act of 2011 (the "Act"), California Public Resources Code Section 21178 et seq., as amended by SB 763 and AB 734. By this letter, Applicant acknowledges and agrees to its obligations under the Act, as set forth in Public Resources Code Sections 21183(e), (f), and (g).

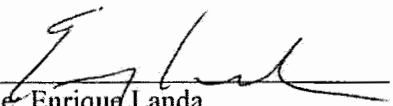
As required by Public Resources Code Section 21183(e), Applicant agrees that all mitigation measures required pursuant to CEQA to certify the Project under the Act shall be conditions of approval, and those conditions will be fully enforceable by the City of San Francisco (the "City") or another agency designated by the City. Applicant agrees that all environmental mitigation measures required to certify the Project under the Act will be monitored and enforced by the City for the life of the obligation.

As required by Public Resources Code Section 21183(f), Applicant agrees to pay the costs of the Court of Appeal in hearing and deciding any case, including payment of the costs for the appointment of a special master if deemed appropriate by the court, in a form and manner specified by the Judicial Council, as provided in the Rules of Court adopted by the Judicial Council pursuant to the Act.

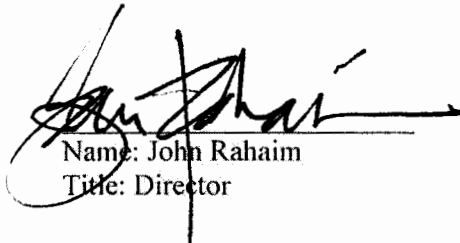
As required by Public Resources Code Section 21183(g), Applicant agrees to pay the costs of preparing the administrative record for the Project, in a form and manner specified by the City, concurrent with review and consideration of the Project pursuant to CEQA and the Act.

Sincerely,

California Barrel Company, LLC

By:   
Name: Enrique Landa  
Title: Manager

Acknowledged and agreed:

  
Name: John Rahaim  
Title: Director



**ATTACHMENT 6**  
**Municipal Code and Labor Compliance Program**

## San Francisco Administrative Code

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## CHAPTER 12R: MINIMUM WAGE

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Sec. 12R.1.	Title.
Sec. 12R.2.	Authority.
Sec. 12R.3.	Definitions.
Sec. 12R.4.	Minimum Wage.
Sec. 12R.5.	Notice, Posting and Payroll Records.
Sec. 12R.6.	Retaliation Prohibited.
Sec. 12R.7.	Implementation and Enforcement.
Sec. 12R.8.	Waiver Through Collective Bargaining.
Sec. 12R.9.	Relationship to Other Requirements.
Sec. 12R.10.	Application of Minimum Wage to Welfare-to-Work Programs.
Sec. 12R.11.	Operative Date.
Sec. 12R.12.	Severability.
Sec. 12R.13.	Amendment by the Board of Supervisors.
Sec. 12R.14.	Civil Actions.
Sec. 12R.15.	Remedies Cumulative.
Sec. 12R.16.	Administrative Penalties and Citations.
Sec. 12R.17.	Violations.
Sec. 12R.18.	Administrative Citation; Notice of Violation.
Sec. 12R.19.	Administrative Citation and Notice of Violation; Service.
Sec. 12R.20.	Administrative Citation; Contents.
Sec. 12R.21.	Administrative Appeal.
Sec. 12R.22.	Regulations.
Sec. 12R.23.	Judicial Review.
Sec. 12R.24.	Other Remedies Not Affected.
Sec. 12R.25.	Outreach.
Sec. 12R.26.	Reports.

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### SEC. 12R.1. TITLE.

This Chapter shall be known as the "Minimum Wage Ordinance."

(Added by Proposition L, 11/4/2003)

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### SEC. 12R.2. AUTHORITY.

This Chapter is adopted pursuant to the powers vested in the City and County of San Francisco ("the City") under the laws and Constitution of the State of California and the City Charter including, but not

limited to, the police powers vested in the City pursuant to Article XI, Section 7 of the California Constitution and Section 1205(b) of the California Labor Law.

(Added by Proposition L, 11/4/2003)

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## **SEC. 12R.3. DEFINITIONS.**

As used in this Chapter, the following capitalized terms shall have the following meanings:

"Agency" shall mean the Office of Labor Standards Enforcement or its successor agency.

"City" shall mean the City and County of San Francisco.

"Employee" shall mean any person who:

(a) In a particular week performs at least two (2) hours of work for an Employer within the geographic boundaries of the City; and

(b) Qualifies as an employee entitled to payment of a minimum wage from any employer under the California minimum wage law, as provided under Section 1197 of the California Labor Code and wage orders published by the California Industrial Welfare Commission, or is a participant in a Welfare-to-Work Program.

"Employer" shall mean any person, as defined in Section 18 of the California Labor Code, including corporate officers or executives, who directly or indirectly or through an agent any other person, including through the services of a temporary services or staffing agency or similar entity, employs or exercises control over the wages, hours or working conditions of any Employee. "Employer" shall include the City and the San Francisco In-Home Supportive Services Public Authority.

"Government Supported Employee" shall mean any Employee who is: (1) under the age of 18 and is employed as an after-school or summer Employee in a bona fide training or apprenticeship program in a position that is subsidized by the federal, state, or local government; or (2) over the age 55 and is employed by a Non-Profit Corporation that provides social welfare services as a core mission to individuals who are over the age of 55 and is in a position that is subsidized by federal, state, or local government. The second category shall apply only to Non-Profit Corporations operating as of January 1, 2015, and apply only as to the number of employees over the age of 55 holding positions in the Corporation as of January 1, 2015 that are subsidized by federal, state, or local government, plus 25% of that number. Any employees hired by a Non-Profit Corporation after January 1, 2015 that exceed the numerical threshold in the prior sentence (including the additional 25%) shall not qualify as "Government Supported Employees." If at any time the number of employees over the age of 55 holding positions in the Corporation that are subsidized by federal, state, or local government falls below that numerical threshold (including the additional 25%), then those positions shall qualify as "Government Supported Employee" positions.

"Minimum Wage" shall have the meaning set forth in Section 12R.4 of this Chapter.

"Nonprofit Corporation" shall mean a nonprofit corporation, duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and (if a foreign corporation) in good standing under the laws of the State of California, which corporation has established and maintains valid nonprofit status under Section 501(c)(3) of the United States Internal Revenue Code of 1986, as amended, and all rules and regulations promulgated under such Section.

"Welfare-to-Work Program" shall mean the City's CalWORKS Program, County Adult Assistance Program (CAAP) which includes the Personal Assisted Employment Services (PAES) Program, and General Assistance Program, and any successor programs that are substantially similar to them.

(Added by Proposition L, 11/4/2003; amended by Proposition J, 11/4/2014)

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## **SEC. 12R.4. MINIMUM WAGE.**

(a) Employers shall pay Employees no less than the Minimum Wage for each hour worked within the geographic boundaries of the City.

(1) Except as provided in subsection 12R.4(b), the Minimum Wage paid to Employees shall be as follows:

(A) Beginning on May 1, 2015, the Minimum Wage shall be an hourly rate of \$12.25.

(B) Beginning on July 1, 2016, the Minimum Wage shall be an hourly rate of \$13.00.

(C) Beginning on July 1, 2017, the Minimum Wage shall be an hourly rate of \$14.00.

(D) Beginning on July 1, 2018, the Minimum Wage shall be an hourly rate of \$15.00.

(E) Beginning on July 1, 2019, and each year thereafter, the Minimum Wage shall increase by an amount corresponding to the prior year's increase, if any, in the Consumer Price Index for urban wage earners and clerical workers for the San Francisco-Oakland-San Jose, CA metropolitan statistical area, as determined by the Controller.

(b) Beginning on May 1, 2015, the Minimum Wage paid to Government Supported Employees shall be an hourly rate of \$12.25. Beginning on July 1, 2016, and each year thereafter, the Minimum Wage paid to Government Supported Employees shall increase by an amount corresponding to the prior year's increase, if any, in the Consumer Price Index for urban wage earners and clerical workers for the San Francisco-Oakland-San Jose, CA metropolitan statistical area, as determined by the Controller.

(Added by Proposition L, 11/4/2003; amended by Proposition J, 11/4/2014)

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## **SEC. 12R.5. NOTICE, POSTING AND PAYROLL RECORDS.**

(a) By December 1 of each year, the Agency shall publish and make available to Employers a bulletin announcing the adjusted Minimum Wage rate for the upcoming year, which shall take effect on January 1. In conjunction with this bulletin, the Agency shall by December 1 of each year publish and make available to Employers, in all languages spoken by more than five percent of the San Francisco work force, a notice suitable for posting by Employers in the workplace informing Employees of the current Minimum Wage rate and of their rights under this Chapter.

(b) Every Employer shall post in a conspicuous place at any workplace or job site where any Employee works the notice published each year by the Agency informing Employees of the current Minimum Wage rate and of their rights under this Chapter. Every Employer shall post such notices in English, Spanish, Chinese and any other language spoken by at least five percent of the Employees at the workplace or job site. Every Employer shall also provide each Employee at the time of hire the Employer's name, address and telephone number in writing.

(c) Employers shall retain payroll records pertaining to Employees for a period of four years, and shall allow the Agency access to such records, with appropriate notice and during business hours, to monitor compliance with the requirements of this Chapter. Where an Employer does not maintain or retain adequate records documenting wages paid or does not allow the Agency reasonable access to such records, it shall be presumed that the Employer paid no more than the applicable federal or state minimum wage, absent clear and convincing evidence otherwise.

(d) The Director of the Agency or his or her designee shall have access to all places of labor subject to this ordinance during business hours to inspect books and records, interview employees and investigate such matters necessary or appropriate to determine whether an Employer has violated any provisions of this ordinance.

(e) The Agency shall be authorized under Section 12R.7 to develop guidelines or rules to govern Agency investigative activities, including but not limited to legal action to be taken in the event of employer

noncompliance or interference with Agency investigative actions.

(Added by Proposition L, 11/4/2003; amended by Ord. [175-11](#), File No. 110594, App. 9/16/2011, Eff. 10/16/2011)

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## SEC. 12R.6. RETALIATION PROHIBITED.

It shall be unlawful for an Employer or any other party to discriminate in any manner or take adverse action against any person in retaliation for exercising rights protected under this Chapter. Rights protected under this Chapter include, but are not limited to: the right to file a complaint or inform any person about any party's alleged noncompliance with this Chapter; and the right to inform any person of his or her potential rights under this Chapter and to assist him or her in asserting such rights. Protections of this Chapter shall apply to any person who mistakenly, but in good faith, alleges noncompliance with this Chapter. Taking adverse action against a person within ninety (90) days of the person's exercise of rights protected under this Chapter shall raise a rebuttable presumption of having done so in retaliation for the exercise of such rights.

(Added by Proposition L, 11/4/2003)

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## SEC. 12R.7. IMPLEMENTATION AND ENFORCEMENT.

(a) **Enforcement Priority.** It is the policy of the City and County of San Francisco that all employees be compensated fairly according to the law and that Employers who engage in wage theft be held accountable. Towards that end, the Mayor and Board of Supervisors shall study and review the feasibility of enacting additional measures consistent with state law to enhance the Agency's enforcement tools and the City's efforts to combat wage theft. The Mayor and Board of Supervisors shall also take steps to ensure optimal collaboration among all City agencies and departments, as well as between the City and state and federal labor standards agencies, in the enforcement of this Chapter.

(b) **Implementation.** The Agency shall be authorized to coordinate implementation and enforcement of this Chapter and may promulgate appropriate guidelines or rules for such purposes consistent with this Chapter. Any guidelines or rules promulgated by the Agency shall have the force and effect of law and may be relied on by Employers, Employees and other parties to determine their rights and responsibilities under this Chapter. Any guidelines or rules may establish procedures for ensuring fair, efficient and cost-effective implementation of this Chapter, including supplementary procedures for helping to inform Employees of their rights under this Chapter, for monitoring Employer compliance with this Chapter, and for providing administrative hearings to determine whether an Employer or other person has violated the requirements of this Chapter. The Agency shall make every effort to resolve complaints in a timely manner and shall have a policy that the Agency shall take no more than one year to settle, request an administrative hearing under Section 12R.7(b), or initiate a civil action under Section 12R.7(c). The failure of the Agency to meet these timelines within one year shall not be grounds for closure or dismissal of the complaint.

(c) **Administrative Enforcement.**

(1) The Agency is authorized to take appropriate steps to enforce this Chapter. The Agency may investigate any possible violations of this Chapter by an Employer or other person. Where the Agency has reason to believe that a violation has occurred, it may order any appropriate temporary or interim relief to mitigate the violation or maintain the status quo pending completion of a full investigation or hearing.

(2) Where the Agency, after a hearing that affords a suspected violator due process, determines that a violation has occurred, it may order any appropriate relief including, but not limited to, reinstatement, the payment of any back wages unlawfully withheld, and the payment of an additional sum as an administrative penalty in the amount of \$50 to each Employee or person whose rights under this Chapter were violated for each day that the violation occurred or continued. A violation for unlawfully withholding wages shall be deemed to continue from the date immediately following the date that the wages were due and payable as provided in Part 1 (commencing with Section 200) of Division 2 of the California Labor Code, to the date immediately preceding the date the wages are paid in full. Where prompt compliance is not forthcoming,

the Agency may take any appropriate enforcement action to secure compliance, including initiating a civil action pursuant to Section 12R.7(c) of this Chapter and/or, except where prohibited by state or federal law, requesting that City agencies or departments revoke or suspend any registration certificates, permits or licenses held or requested by the Employer or person until such time as the violation is remedied. All City agencies and departments shall cooperate with revocation or suspension requests from the Agency. In order to compensate the City for the costs of investigating and remedying the violation, the Agency may also order the violating Employer or person to pay to the City a sum of not more than \$50 for each day and for each Employee or person as to whom the violation occurred or continued. Such funds shall be allocated to the Agency and shall be used to offset the costs of implementing and enforcing this Chapter. The amounts of all sums and payments authorized or required under this Chapter shall be updated annually for inflation, beginning January 1, 2005, using the inflation rate and procedures set forth in Section 4(b) 12R.4<sup>1</sup> of this Chapter.

(3) An Employee or other person may report to the Agency in writing any suspected violation of this Chapter. The Agency shall encourage reporting pursuant to this subsection by keeping confidential, to the maximum extent permitted by applicable laws, the name and other identifying information of the Employee or person reporting the violation. Provided, however, that with the authorization of such person, the Agency may disclose his or her name and identifying information as necessary to enforce this Chapter or for other appropriate purposes. In order to further encourage reporting by Employees, if the Agency notifies an Employer that the Agency is investigating a complaint, the Agency shall require the Employer to post or otherwise notify its Employees that the Agency is conducting an investigation, using a form provided by the Agency.

(d) **Civil Enforcement.** The Agency, the City Attorney, any person aggrieved by a violation of this Chapter, any entity a member of which is aggrieved by a violation of this Chapter, or any other person or entity acting on behalf of the public as provided for under applicable state law, may bring a civil action in a court of competent jurisdiction against the Employer or other person violating this Chapter and, upon prevailing, shall be entitled to such legal or equitable relief as may be appropriate to remedy the violation including, without limitation, the payment of any back wages unlawfully withheld, the payment of an additional sum as penalties in the amount of \$50 to each Employee or person whose rights under this Chapter were violated for each day that the violation occurred or continued, reinstatement in employment and/or injunctive relief, and shall be awarded reasonable attorneys' fees and costs. Provided, however, that any person or entity enforcing this Chapter on behalf of the public as provided for under applicable state law shall, upon prevailing, be entitled only to equitable, injunctive or restitutionary relief, and reasonable attorneys' fees and costs. Nothing in this Chapter shall be interpreted as restricting, precluding, or otherwise limiting a separate or concurrent criminal prosecution under the Municipal Code or state law. Jeopardy shall not attach as a result of any administrative or civil enforcement action taken pursuant to this Chapter.

(e) **Interest.** In any administrative or civil action brought for the nonpayment of wages under this Section, the Agency or court, as the case may be, shall award interest on all due and unpaid wages at the rate of interest specified in subdivision (b) of Section 3289 of the California Civil Code, which shall accrue from the date that the wages were due and payable as provided in Part 1 (commencing with Section 200) of Division 2 of the California Labor Code, to the date the wages are paid in full.

(f) **Posting Notice of Violation.** If an Employer fails to comply with a settlement agreement with the Agency, a final determination by the Agency after an administrative hearing officer issues a decision after a hearing under Section 12R.7(b), an administrative citation issues under Section 12R.19, a decision made in an administrative appeal brought under Section 12R.21, or judgment issued by the Superior Court, and the Employer has not filed an appeal from the administrative hearing decision, administrative citation, administrative appeal decision, or judgment, or the appeal is final, the Agency may require the Employer to post public notice of the Employer's failure to comply in a form determined by the Agency.

(g) **City Employees.** Where the aggrieved party is an Employee of the City, the Employee shall be entitled to all rights and remedies available under this Section 12R.7 except the Employee may not recover the \$50 per diem penalty provided for in subsections (b) and (c) of this Section 12R.7.



(Added by Proposition L, 11/4/2003; amended by Ord. 205-06, File No. 060247, App. 7/25/2006; Ord. [175-11](#), File No. 110594, App. 9/16/2011, Eff. 10/16/2011; Proposition J, 11/4/2014)

#### CODIFICATION NOTES

1. So in Proposition J.

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### **SEC. 12R.8. WAIVER THROUGH COLLECTIVE BARGAINING.**

All or any portion of the applicable requirements of this Chapter shall not apply to Employees covered by a bona fide collective bargaining agreement to the extent that such requirements are expressly waived in the collective bargaining agreement in clear and unambiguous terms.

(Added by Proposition L, 11/4/2003)

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### **SEC. 12R.9. RELATIONSHIP TO OTHER REQUIREMENTS.**

This Chapter provides for payment of a minimum wage and shall not be construed to preempt or otherwise limit or affect the applicability of any other law, regulation, requirement, policy or standard that provides for payment of higher or supplemental wages or benefits, or that extends other protections including, but not limited to, the San Francisco Minimum Compensation Ordinance.

(Added by Proposition L, 11/4/2003)

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### **SEC. 12R.10. APPLICATION OF MINIMUM WAGE TO WELFARE-TO-WORK PROGRAMS.**

The Minimum Wage established pursuant to Section 12R.4 of this Chapter shall apply to the City's Welfare-to-Work Programs under which persons must perform work in exchange for receipt of benefits. Participants in Welfare-to-Work Programs shall not, during a given benefits period, be required to work more than a number of hours equal to the value of all cash benefits received during that period, divided by the Minimum Wage. Where state or federal law would preclude the City from reducing the number of work hours required under a given Welfare-to-Work Program, the City may comply with this Section by increasing the cash benefits awarded so that their value is no less than the product of the Minimum Wage multiplied by the number of work hours required.

(Added by Proposition L, 11/4/2003; amended by Proposition J, 11/4/2014)

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### **SEC. 12R.11. OPERATIVE DATE.**

The changes to this Chapter adopted at the November 4, 2014 municipal election shall have prospective effect only and shall become operative on May 1, 2015.

(Added by Proposition L, 11/4/2003; amended by Proposition J, 11/4/2014)

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### **SEC. 12R.12. SEVERABILITY.**

If any part or provision of this Chapter, or the application of this Chapter to any person or circumstance, is held invalid, the remainder of this Chapter, including the application of such part or provisions to other persons or circumstances, shall not be affected by such a holding and shall continue in full force and effect. To this end, the provisions of this Chapter are severable.

(Added by Proposition L, 11/4/2003)

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### **SEC. 12R.13. AMENDMENT BY THE BOARD OF SUPERVISORS.**

This Chapter may be amended by the Board of Supervisors as regards the implementation or enforcement thereof, but not as regards the substantive requirements of the Chapter or its scope of coverage.

(Added by Proposition L, 11/4/2003)

## SEC. 12R.14. CIVIL ACTIONS.

In addition to the actions provided for in Section 12R.7(c), the City Attorney may bring a civil action to enjoin any violation of this Chapter. The City shall be entitled to its attorney's fees and costs in any action brought pursuant to this Section where the City is the prevailing party.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

## SEC. 12R.15. REMEDIES CUMULATIVE.

The remedies, penalties and procedures provided under this Chapter are cumulative and are not intended to be exclusive of any other available remedies, penalties and procedures.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

## SEC. 12R.16. ADMINISTRATIVE PENALTIES AND CITATIONS.

(a) **Administrative Penalties; Citations.** An administrative penalty may be assessed for a violation of the provisions of this Chapter as specified below. The penalty may be assessed by means of an administrative citation issued by the Director of the Office of Labor Standards Enforcement.

(b) **Administrative Penalty Amounts.** In addition to all other civil penalties provided for by law, the following violations shall be subject to administrative penalties in the amounts set forth below:

VIOLATION	PENALTY AMOUNT
Failure to maintain payroll records or to retain payroll records for four years – Administrative Code Section 12R.5(c)	\$500.00
Failure to allow the Office of Labor Standards Enforcement to inspect payroll records – Administrative Code Section 12R.5(c)	\$500.00
Retaliation for exercising rights under Minimum Wage Ordinance – Administrative Code Section 12R.6 The Penalty for retaliation is \$1,000.00 per employee.	\$1,000.00
Failure to Post notice of Minimum Wage rate – Administrative Code Section 12R.5(b) Failure to provide notice of investigation to employees – Administrative Code Section 12R.7(b) Failure to post notice of violation to public – Administrative Code Section 12R.7(e) Failure to provide employer's name, address, and telephone number in writing – Administrative Code Section 12R.5(b)	\$500.00

The penalty amounts shall be increased cumulatively by fifty percent (50%) for each subsequent violation of the same provision by the same employer or person within a three (3) year period. The maximum penalty amount that may be imposed by administrative citation in a calendar year for each type of violation listed above shall be \$5,000 or \$10,000 if a citation for retaliation is issued. In addition to the penalty amounts listed above, the Office of Labor Standards Enforcement may assess enforcement costs to cover the reasonable costs incurred in enforcing the administrative penalty, including reasonable attorneys' fees. Enforcement costs shall not count toward the \$5,000 annual maximum.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006; amended by Ord. [175-11](#), File No. 110594, App. 9/16/2011, Eff. 10/16/2011)

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## SEC. 12R.17. VIOLATIONS.

(a) **Separate and Continuing Violations; Penalties Paid Do Not Cure Violations.** Each and every day that a violation exists constitutes a separate and distinct offense. Each section violated constitutes a separate violation for any day at issue. If the person or persons responsible for a violation fail to correct the violation within the time period specified on the citation and required under Section 12R.18, the Director of the Office of Labor Standards Enforcement may issue subsequent administrative citations for the uncorrected violation(s) without issuing a new notice as provided in Section 12R.18(b). Payment of the penalty shall not excuse the failure to correct the violation nor shall it bar any further enforcement action by the City. If penalties and costs are the subject of administrative appeal or judicial review, then the accrual of such penalties and costs shall be stayed until the determination of such appeal or review is final.

(b) **Payments to City; Due Date; Late Payment Penalty.** All penalties assessed under Section 12R.16 shall be payable to the City and County of San Francisco. Administrative penalties and costs assessed by means of an administrative citation shall be due within thirty (30) days from the date of the citation. The failure of any person to pay an administrative penalty and costs within that time shall result in the assessment of an additional late fee. The amount of the late fee shall be ten (10) percent of the total amount of the administrative penalty assessed for each month the penalty and any already accrued late payment penalty remains unpaid.

(c) **Collection of Penalties; Special Assessments.** The failure of any person to pay a penalty assessed by administrative citation under Section 12R.16 within the time specified on the citation constitutes a debt to the City. The City may file a civil action, create and impose liens as set forth below, or pursue any other legal remedy to collect such money.

(d) **Liens.** The City may create and impose liens against any property owned or operated by a person who fails to pay a penalty assessed by administrative citation. The procedures provided for in Chapter 10, Article XX of the Administrative Code shall govern the imposition and collection of such liens.

(e) **Payment to City.** The Labor Standards Enforcement Officer has the authority to require that payment of back wages found to be due and owing to employees be paid directly to the City and County of San Francisco for disbursement to the employees. The Controller shall hold the back wages in escrow for workers whom the Labor Standards Enforcement Officer, despite his/her best efforts, including any required public notice, cannot locate; funds so held for three years or more shall be dedicated to the enforcement of the Minimum Wage Ordinance or other laws enforced by the Office of Labor Standards Enforcement.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006; amended by Ord. [175-11](#), File No. 110594, App. 9/16/2011, Eff. 10/16/2011; Ord. [75-14](#), File No. 140226, App. 5/28/2014, Eff. 6/27/2014; Proposition J, 11/4/2014)

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## SEC. 12R.18. ADMINISTRATIVE CITATION; NOTICE OF VIOLATION.

(a) **Issuance of Citation.** The Director has the authority to issue an administrative citation for any violation of this Chapter that is identified in Section 12R.16(b). The administrative citation shall be issued on a form prescribed by the Office of Labor Standards Enforcement.

(b) **Notice and Opportunity to Cure.** In order to facilitate compliance, the Director of the Office of Labor Standards Enforcement ("Director") or his or her designee may notify any person in violation of the Code provisions identified in Section 12R.16(b) of such violation prior to the issuance of an administrative citation. Regardless of the manner of service of the notice under Section 12R.19, the Director or his or her designee may post the notice of violation by affixing the notice to a surface in a conspicuous place on property that is (1) the person's principal place of business in the City, or (2) if the person's principal place of business is outside the City, the fixed location within the City from or at which the person conducts business in the City, or (3) if the person does not regularly conduct business from a fixed location in the City, one of the following: (i) the location where the person maintains payroll records if the notice of violation is for violation of Section 12R.5(c), or (ii) the jobsite or other primary location where the person's employees perform services in the City at the time the notice is posted. The notice of violation shall specify the action required to correct or otherwise remedy the violation(s). At the discretion of the Director or his or her designee, the person or persons responsible for the violation may be allowed ten (10) days from the date of the notice of violation to establish that no violation occurred or such person or persons are not responsible for the violation, or correct or otherwise remedy the violation; provided, however, that the Director may, in his or her discretion, assign a longer period, not to exceed twenty-one (21) days, within which to correct or otherwise remedy each violation, or establish that no violation occurred or such person or persons are not responsible for the violation. The Director may consider the cost of correction and the time needed to obtain information, documents, data and records for correction in assigning a specific period of time within which to correct or otherwise remedy each violation, or obtain and submit evidence that no violation occurred or such person or persons are not responsible for the violation.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006; amended by Ord. [175-11](#), File No. 110594, App. 9/16/2011, Eff. 10/16/2011)

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## **SEC. 12R.19. ADMINISTRATIVE CITATION AND NOTICE OF VIOLATION; SERVICE.**

Service of a notice of violation and an administrative citation under Section 12R.16 may be accomplished as follows:

(a) The Director or his or her designee may obtain the signature of the person responsible for the violation to establish personal service of the citation; or

(b) (1) Director or his or her designee shall post the citation by affixing the citation to a surface in a conspicuous place on the property described in Section 12R.18. Conspicuous posting of the citation is not required when personal service is accomplished or when conspicuous posting poses a hardship, risk to personal health or safety or is excessively expensive; and

(2) The Director or his or her designee shall serve the citation by first class mail as follows:

(i) The administrative citation shall be mailed to the person responsible for the violation by first class mail, postage prepaid, with a declaration of service under penalty of perjury; and

(ii) A declaration of service shall be made by the person mailing the administrative citation showing the date and manner of service by mail and reciting the name and address of the person to whom the citation is issued; and

(iii) Service of the administrative citation by mail in the manner described above shall be effective on the date of mailing.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

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## **SEC. 12R.20. ADMINISTRATIVE CITATION; CONTENTS.**

The administrative citation under Section 12R.16 shall include all the following:

- (1) A description of the violation;
- (2) The date and location of the violation(s) observed;
- (3) A citation to the provisions of law violated;
- (4) A description of corrective action required;
- (5) A statement explaining that each day of a continuing violation may constitute a new and separate violation;
- (6) The amount of administrative penalty imposed for the violation(s);
- (7) A statement informing the violator that the fine shall be paid to the City and County of San Francisco within thirty (30) days from the date on the administrative citation, the procedure for payment, and the consequences of failure to pay;
- (8) A description of the process for appealing the citation, including the deadline for filing such an appeal; and
- (9) The name and signature of the Director.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

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## SEC. 12R.21. ADMINISTRATIVE APPEAL.

- (a) **Period of Limitation for Appeal.** Persons receiving an administrative citation may appeal it within fifteen (15) days from the date the citation is served. The appeal must be in writing and must indicate a return address. It must be accompanied by the penalty amount, specifying the basis for the appeal in detail, and must be filed with both the Office of Labor Standards Enforcement and the Controller's Office as indicated in the administrative citation.
- (b) **Hearing Date.** As soon as practicable after receiving the written notice of appeal and the penalty amount, the Controller or his or her designee shall promptly select a hearing officer (who shall not be an employee in the Office of Labor Standards Enforcement) to hear and decide the administrative appeal. The hearing officer shall fix a date, time and place for the hearing on the appeal. Written notice of the time and place for the hearing may be served by first class mail, at the return address indicated on the written appeal. Service of the notice must be made at least ten (10) days prior to the date of the hearing to the person appealing the citation. The hearing shall be held no later than thirty (30) days after service of the notice of hearing, unless that time is extended by mutual agreement of the parties.
- (c) **Notice.** Except as otherwise provided by law, the failure of any person with an interest in property affected by the administrative citation, or other person responsible for a violation, to receive a properly addressed notice of the hearing shall not affect the validity of any proceedings under this Chapter. Service by first class mail, postage prepaid, shall be effective on the date of mailing.
- (d) **Failure to Appeal.** Failure of any person to file an appeal in accordance with the provisions of this Section or to appear at the hearing shall constitute a failure to exhaust administrative remedies and a forfeiture of the penalty amount previously remitted.
- (e) **Submittals for the Hearing.** No later than five (5) days prior to the hearing, the person to whom the citation was issued and the Office of Labor Standards Enforcement shall submit to the hearing officer, with simultaneous service on the opposing party, written information including, but not limited to, the following: the statement of issues to be determined by the hearing officer and a statement of the evidence to be offered and the witnesses to be presented at the hearing.
- (f) **Conduct of Hearing.** The hearing officer appointed by the Controller or the Controller's designee shall conduct all appeal hearings under this Chapter. The Office of Labor Standards Enforcement shall have



the burden of proof in such hearings. The hearing officer may accept evidence on which persons would commonly rely in the conduct of their serious business affairs, including but not limited to the following:

- (1) A valid citation shall be prima facie evidence of the violation;
- (2) The hearing officer may accept testimony by declaration under penalty of perjury relating to the violation and the appropriate means of correcting the violation;
- (3) The person responsible for the violation, or any other interested person, may present testimony or evidence concerning the violation and the means and time frame for correction.

The hearing shall be open to the public and shall be tape-recorded. Any party to the hearing may, at his or her own expense, cause the hearing to be recorded and transcribed by a certified court reporter. The hearing officer may continue the hearing and request additional information from the Office of Labor Standards Enforcement or the appellant prior to issuing a written decision.

(g) **Hearing Officer's Decision; Findings.** The hearing officer shall make findings based on the record of the hearing and issue a decision based on such findings within fifteen (15) days of conclusion of the hearing. The hearing officer's decision may uphold the issuance of a citation and penalties stated therein, may dismiss a citation, or may uphold the issuance of the citation but reduce, waive or conditionally reduce or waive the penalties stated in a citation or any late fees assessed if mitigating circumstances are shown and the hearing officer finds specific grounds for reduction or waiver in the evidence presented at the hearing. The hearing officer may impose conditions and deadlines for the correction of violations or the payment of outstanding civil penalties. Copies of the findings and decision shall be served upon the appellant and the Office of Labor Standards Enforcement by certified mail.

(h) **Hearing Officer's Decision.** The decision of the hearing officer is final. If the hearing officer concludes that the violation charged in the citation did not occur or that the person charged in the citation was not the responsible party, the Office of Labor Standards Enforcement shall refund or cause to be refunded the penalty amount to the person who deposited such amount. The hearing officer's decision shall be served on the appellant by certified mail.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

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## SEC. 12R.22. REGULATIONS.

The Office of Labor Standards Enforcement may promulgate and enforce rules and regulations, and issue determinations and interpretations relating to the administrative penalty and citation system pursuant to Sections 12R.16 through 12R.20, inclusive. The Controller may promulgate and enforce rules and regulations, and issue determinations and interpretations relating to the conduct of administrative appeals under Section 12R.21. Any rules and regulations promulgated by the Office of Labor Standards Enforcement or Controller shall be approved as to legal form by the City Attorney, and shall be subject to not less than one noticed public hearing. The rules and regulations shall become effective 30 days after receipt by the Clerk of the Board of Supervisors, unless the Board of Supervisors by resolution disapproves or modifies the regulations. The Board of Supervisors' determination to modify or disapprove a rule or regulation submitted by the Office of Labor Standards Enforcement or Controller shall not impair the ability of the Office of Labor Standards Enforcement or Controller to resubmit the same or similar rule or regulation directly to the Board of Supervisors if the Office of Labor Standards Enforcement or Controller determines it is necessary to effectuate the purposes of this Chapter.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

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## SEC. 12R.23. JUDICIAL REVIEW.

(a) **Procedures.** After receipt of the decision of the hearing officer under Section 12R.21, the appellant may file an appeal with the superior court pursuant to California Government Code Section 53069.4. The



appeal shall be submitted within twenty (20) days of the date of mailing of the hearing officer's decision, with the applicable filing fee. The appeal shall state the reasons the appellant objects to the findings or decision.

(b) **Review.** The superior court shall conduct a de novo hearing, except that the contents of the Office of Labor Standards Enforcement's file (excluding attorney client communications and other privileged or confidential documents and materials that are not discoverable or may be excluded from evidence in judicial proceedings under the Evidence Code, Civil Code, Code of Civil Procedure or other applicable law) shall be received into evidence. A copy of the notice of violation and imposition of penalty shall be entered as prima facie evidence of the facts stated therein.

(c) **Filing Fee.** The superior court filing fee shall be twenty-five (\$25.00). If the court finds in favor of the appellant, the amount of the fee shall be reimbursed to the appellant by the City and County of San Francisco. Any deposit of penalty shall be refunded by the City and County of San Francisco in accordance with the judgment of the court.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

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## **SEC. 12R.24. OTHER REMEDIES NOT AFFECTED.**

The administrative citation procedures established in this Chapter shall be in addition to any other criminal, civil, or other remedy established by law which may be pursued to address violations of this Chapter. An administrative citation issued pursuant to this Chapter shall not prejudice or adversely affect any other action, civil or criminal, that may be brought to abate a violation or to seek compensation for damages suffered.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

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## **SEC. 12R.25. OUTREACH.**

The Office of Labor Standards Enforcement shall establish a community-based outreach program to conduct education and outreach to employees. In partnership with organizations involved in the community-based outreach program, the Office of Labor Standards shall create outreach materials that are designed for workers in particular industries.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006; amended by Ord. [175-11](#), File No. 110594, App. 9/16/2011, Eff. 10/16/2011)

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## **SEC. 12R.26. REPORTS.**

The Office of Labor Standards Enforcement shall provide annual reports to the Board of Supervisors on the implementation of the Minimum Wage Ordinance.

(Added by Ord. 205-06, File No. 060247, App. 7/25/2006)

## DEPARTMENT OF INDUSTRIAL RELATIONS

Office of the Director  
1515 Clay Street, 17<sup>th</sup> Floor  
Oakland, California 94612



December 21, 2012

San Francisco Office of Labor Standards Enforcement  
City Hall – Room 430  
1 Dr. Carlton B. Goodlett Place  
San Francisco, CA 94102

Attention: Ms. Donna Levitt

RE: Application for Approval of Labor Compliance Program  
LCP ID No. 2012.01135

Dear Ms. Levitt:

In accordance with the provisions of Title 8, California Code of Regulations, section 16425, approval of San Francisco Office of Labor Standards Enforcement's Labor Compliance Program is hereby granted, effective December 21, 2012. This approval covers any project for which your agency is required by state statute to have an approved LCP, including a project subject to the requirements of Section 75075 of the Public Resources Code (public works projects funded by Proposition 84).

An LCP must comply with the requirements of Title 8, California Code of Regulations, sections 16421 through 16439, as well as with all other statutes and regulations pertaining to the monitoring and enforcement of the state's prevailing wage requirements. Among other things, you must file an annual report in accordance with the requirements of section 16431 of the regulations, whether or not your LCP has conducted any monitoring or enforcement during the preceding year. The annual reporting period is July 1 to June 30, and annual reports are due by no later than August 31.

Please note that Labor Code section 1773.1 requires your agency to notify the Department whenever awarding a public works contract for *any* project of \$30,000 or more that will use apprenticeable crafts, and 8 Cal.Code Regs. section 16451(a) also requires this notice for any project of any amount that requires use of DIR's Compliance Monitoring Unit (CMU) or a prescribed alternative. This notice should be provided on the electronic PWC-100 form found on the CMU website at <http://www.dir.ca.gov/dlse/cmu/cmu.html>.

Additional information and resources pertaining to labor compliance programs are available on the Department's website at <http://www.dir.ca.gov/lcp.asp>. Questions about enforcement policy must be directed to the Division of Labor Standards Enforcement. If you have any other questions, including about this notice, please contact Jonathan LeGaux at (510) 622-5054.

Sincerely,

A handwritten signature in purple ink that reads "Christine Baker".

Christine Baker, Director of Industrial Relations

cc: Susan Nakagama, Regional Manager, Division of Labor Standards Enforcement

**ATTACHMENT 7**  
**GHG Baseline Analysis**

## MEMORANDUM

To: Ms. Heather King  
**California Air Resources Board**

From: Michael Keinath and David Kim  
**Ramboll**

**GREENHOUSE GAS (GHG) EMISSIONS AVOIDED BY REPLACING THE  
POTRERO POWER PLANT IN SAN FRANCISCO WITH A MIXED USE  
DEVELOPMENT**

At our meeting at the ARB's offices in Sacramento on January 11, we discussed using final year emissions from the Potrero Power Plant (the "Plant") to calculate net GHG emissions from the Potrero Power Station mixed-use development which would replace the Plant. ARB staff asked for additional information to demonstrate that the closure of the Plant did not result in another power plant with equal or higher carbon intensity (i.e., coal or natural gas fired power plant) being built to take up the load. To determine whether this is the case, we researched the source of power being supplied to the City of San Francisco (the "City") in place of the Plant and quantified the difference in operational CO<sub>2</sub> emissions resulting from the alternate power source.

Date January 25, 2018

Ramboll  
201 California Street  
Suite 1200  
San Francisco, CA 94111  
USA

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[www.ramboll.com](http://www.ramboll.com)

The Plant shut down in January 2011, after completion of the Trans Bay Cable which provided the City of San Francisco with sufficient power as mandated by the California Independent System Operator (CAISO).<sup>1</sup> The Trans Bay Cable connects the Potrero Substation to the Pittsburg Substation in Pittsburg, CA (see **Figure 1**). According to Trans Bay Cable,<sup>2</sup> the Pittsburg Substation "receives power through transmission lines from many other power plants" including renewable sources.

The renewable electricity generation capacity within the State has grown by 33% in the recent past while natural gas generation capacity has declined slightly, suggesting that the carbon intensity of electricity currently supplied to the City of San Francisco is lower than that which would have been supplied by PPP (See **Figure 2**).

We estimated the amount of CO<sub>2</sub> emissions avoided by closure of the Plant using the carbon intensity of electricity delivered by Pacific Gas & Electric (PG&E) – the main electricity supplier to the city of San Francisco – together with operational statistics of the Plant in the years leading up to its closure. Between 2011 and 2015, the carbon intensity of electricity supplied by PG&E averaged 421 lb

<sup>1</sup> "2010 Local Capacity Technical Analysis", California Independent System Operator, April 2009. <http://www.caiso.com/Documents/Draft2010LCTStudyReport07-Apr-2009.pdf>.

<sup>2</sup> Trans Bay Cable Operation, from <http://www.transbaycable.com/cable-operation/>.

CO<sub>2</sub>/MWh, as shown in **Figure 3**.<sup>3</sup> US Energy Information Administration (US EIA) survey Form EIA-923 statistics indicate that, in the period 2001-2010 leading up to closure, the Plant produced between 385,621 to 1,135,034 MWh/year at an average carbon intensity of 1,257 lb CO<sub>2</sub>/MWh (see **Figure 4** and **Table 1**).<sup>4</sup> The replacement of the Plant with electricity from the PG&E grid (which is supplied by newer and more efficient natural gas and renewable-source power plants) resulted in approximately a factor of 3 reduction in carbon intensity of electricity, leading to 146,226 to 430,401 MT CO<sub>2</sub> avoided per year depending on the amount of electricity generated by the Plant (see **Table 2**).

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<sup>3</sup> Data obtained from The Climate Registry CRIS Public Reports (<https://www.theclimateregistry.org/our-members/cris-public-reports/>), also provided by PG&E (<http://www.pgecurrents.com/2015/01/30/pge-cuts-carbon-emissions-with-clean-energy/>).

<sup>4</sup> Detailed Electric Power Data (survey Form EIA-923), USEIA (2017).  
<https://www.eia.gov/electricity/data/eia923/>.

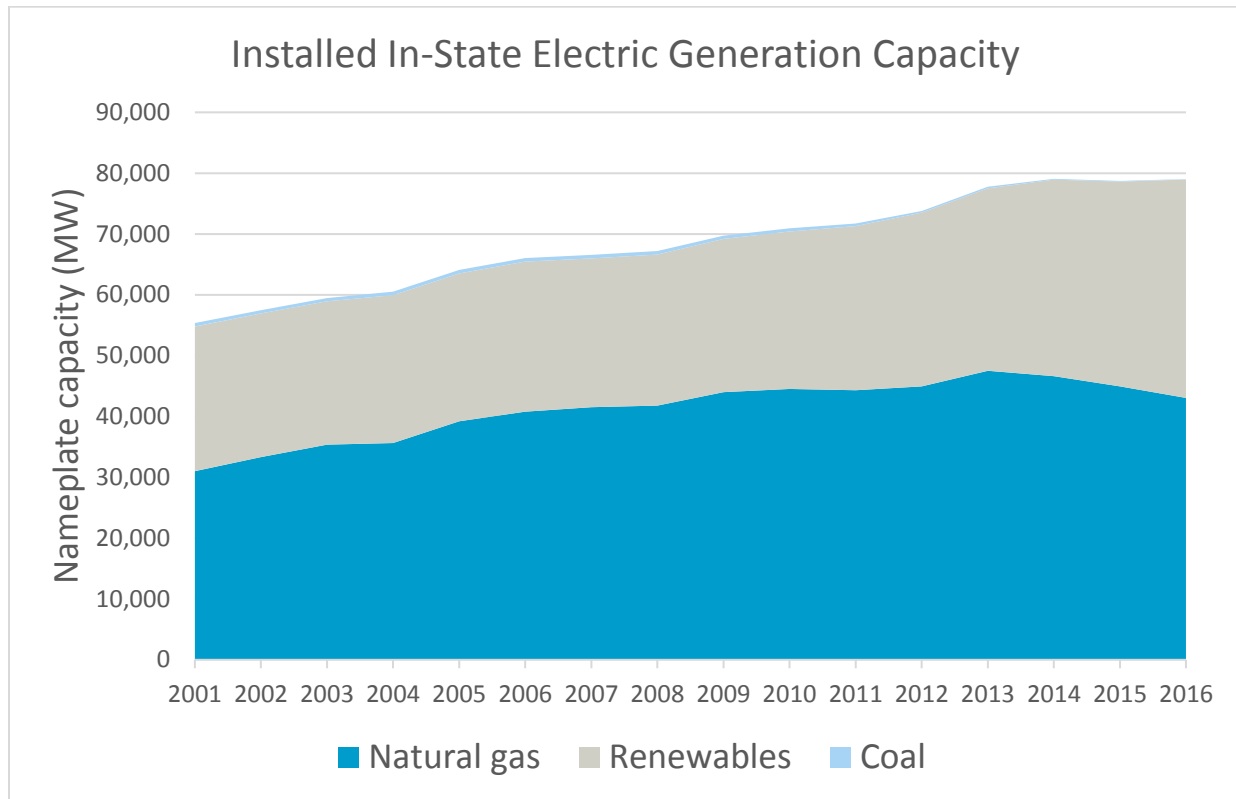
## FIGURES



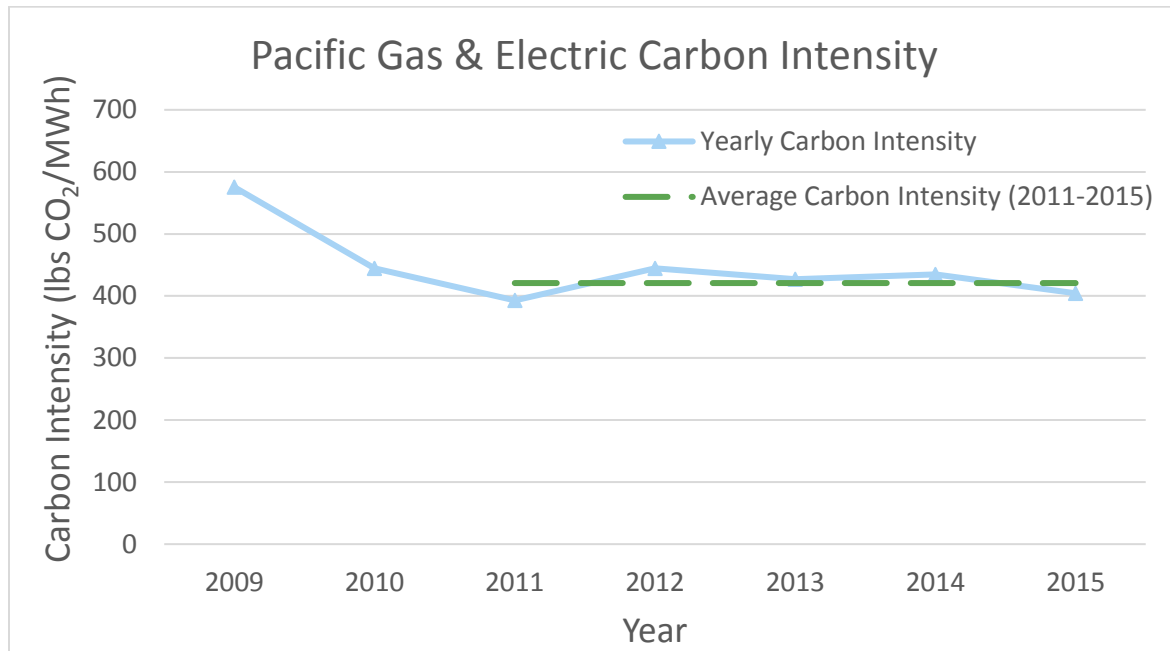
## A 53 Mile HVDC Cable w/Converter Stations at Both Ends Interconnecting PG&E's Pittsburg and Potrero Substations



**Figure 2: Installed In-State Electric Generation Capacity (CEC, 2017)**

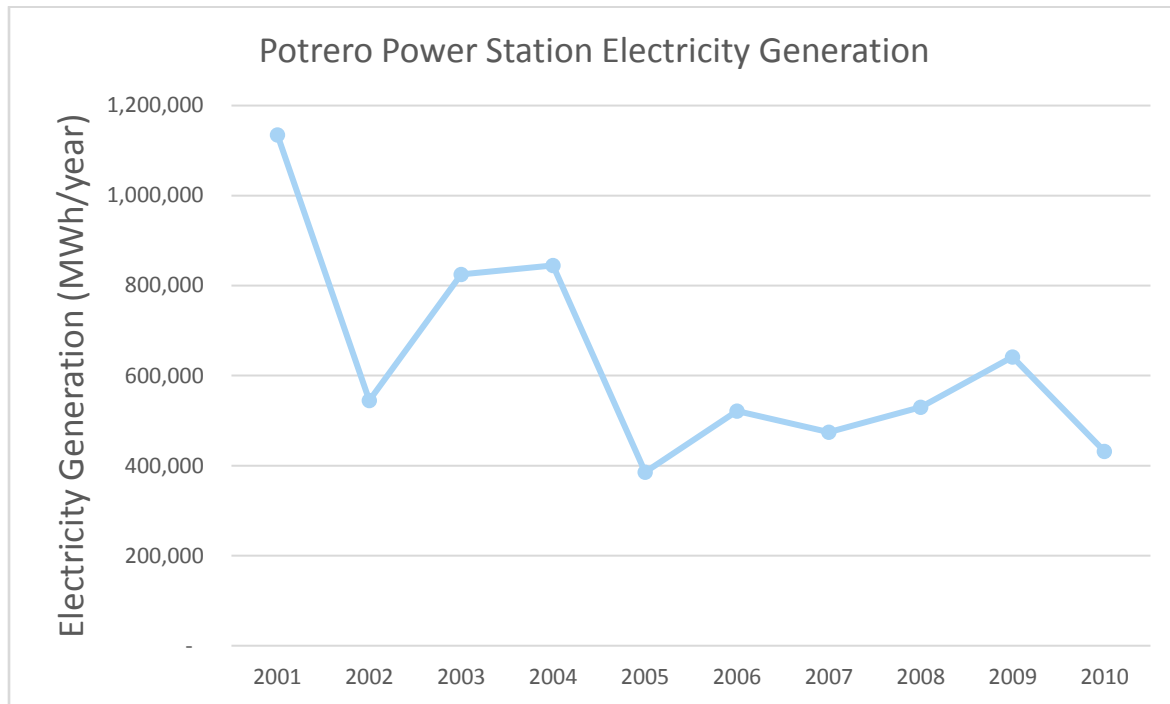


**Figure 3: Pacific Gas & Electric Electricity Carbon Intensity (The Climate Registry, 2017)**



Dashed line shows the average carbon intensity from 2011 – 2015.

**Figure 4: Potrero Power Station Electricity Generation (MWh/year) from 2001-2010**



US EIA survey Form EIA-923

## TABLES

**TABLE 1: Power Generation and CO<sub>2</sub> Intensity of Potrero Power Plant (2001-2010)**  
**Potrero Power Station Mixed-Use Development Project - AB900 Analysis**  
**San Francisco, California**

<b>Year</b>	<b>Electricity Fuel Consumption (MMBTU)<sup>1</sup></b>	<b>Net Electricity Generation (MWh)</b>	<b>Electricity energy intensity (MMBTU/MWh)</b>	<b>CO<sub>2</sub> intensity (lb CO<sub>2</sub>/MWh)<sup>2</sup></b>
<b>2001</b>	11,091,583	1,135,034	9.77	1,143
<b>2002</b>	5,866,154	545,068	10.76	1,259
<b>2003</b>	8,580,864	824,960	10.40	1,216
<b>2004</b>	8,821,473	844,596	10.44	1,221
<b>2005</b>	4,159,731	385,621	10.79	1,261
<b>2006</b>	5,785,271	521,444	11.09	1,297
<b>2007</b>	5,371,294	474,719	11.31	1,323
<b>2008</b>	5,863,876	530,220	11.06	1,293
<b>2009</b>	7,011,187	641,668	10.93	1,278
<b>2010</b>	4,702,073	431,813	10.89	1,273
<b>Average</b>				<b>1,257</b>

Notes:

<sup>1</sup> Data from Form EIA-923 detailed data for 2010 (<https://www.eia.gov/electricity/data/eia923/>)

<sup>2</sup> The carbon intensity of natural gas combustion is assumed to be 117 lb CO<sub>2</sub>/MMBTU, based on data from US EPA (2014), "Emission Factors for Greenhouse Gas Inventories". Available at: [https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf)



**TABLE 2: Comparison of CO<sub>2</sub> Emissions between PPP and PG&E  
Potrero Power Station Mixed-Use Development Project - AB900 Analysis  
San Francisco, California**

	<b>CO<sub>2</sub> Intensity (lb CO<sub>2</sub>/MWh)</b>
<b>PPP (2001-2010 average)</b>	1,257
<b>PG&amp;E (2011-2015 average)<sup>1</sup></b>	421
<b>Difference in CO<sub>2</sub> Intensity</b>	836

	<b>Low</b>	<b>High</b>
<b>Range of PPP Electricity Generation over 2001-2010 (MWh/year)</b>	385,621	1,135,034
<b>CO<sub>2</sub> Avoided (MT CO<sub>2</sub>/year)<sup>2</sup></b>	146,226	430,401

<b>Unit conversions</b>	
2.204	lb/kg
1,000	kg/MT

Notes:

<sup>1</sup> Data obtained from The Climate Registry CRIS Public Reports (<https://www.theclimateregistry.org/our-members/cris-public-reports/>)

<sup>2</sup> CO<sub>2</sub> avoided is calculated as the minimum/maximum electricity generated annually by PPP over 2001-2010 multiplied by the difference in CO<sub>2</sub> intensity between PPP and PG&E.

**ATTACHMENT 8**  
**GHG Emissions Methodology & Documentation**

Prepared for  
**San Francisco Planning Department**  
**San Francisco, California**

Prepared by  
**Ramboll US Corporation**  
**San Francisco, California**

Project Number  
**1690001653**

Date  
**July 12, 2018**

**APPLICATION FOR CEQA STREAMLINING  
GHG EMISSIONS METHODOLOGY AND  
DOCUMENTATION  
POTRERO POWER STATION MIXED-USE  
DEVELOPMENT PROJECT  
1201A ILLINOIS STREET  
SAN FRANCISCO, CALIFORNIA**

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## ACRONYMS AND ABBREVIATIONS

AB32:	(California) Assembly Bill 32 (Nuñez)
AB900:	(California) Assembly Bill 900 (Buchanan)
ARB:	(California) Air Resources Board
BAAQMD:	Bay Area Air Quality Management District
CalEEMod <sup>®</sup> :	California Emissions Estimator Model
CAPCOA:	California Air Pollution Control Officers Association
CEC:	California Energy Commission
CEQA:	California Environmental Quality Act
CFR:	Code of Federal Regulations
CH <sub>4</sub> :	methane
CO <sub>2</sub> e:	carbon dioxide equivalents
EIR:	Environmental Impact Report
EMFAC2014:	EMission FACtor model version 2014
g/hp-hr:	gram per horsepower-hour
GHG:	greenhouse gas
GSF:	gross square feet
GWP:	global warming potential
kWh:	kilowatt-hour
m:	meter
mph:	miles per hour
MT:	metric tonne
N <sub>2</sub> O:	nitrous oxide
PG&E:	Pacific Gas and Electric Company
RPS:	Renewables Portfolio Standard
yr:	year

# 1. INTRODUCTION

The proposed Potrero Power Station Mixed-Use Development Project (herein referred to as the “Project”) has applied for California Environmental Quality Act (CEQA) judicial streamlining under Public Resources Code (PRC) Section 21178 et seq. In support of the Application, Ramboll quantified both direct and indirect greenhouse gas emissions associated with the Project’s construction and operation, to show the Project meets the requirement for no “net additional emission of greenhouse gases [GHG], including greenhouse gas emissions from employee transportation” [California PRC §21183(c)].

Ramboll quantified potential operational GHG emissions for the Project as well as the Project’s one-time emissions due to construction. Additionally, Ramboll quantified the GHG emissions associated with the operation of the Potrero Power Plant (the “Plant”) in its final years of operation, noting that these represent the avoided GHG emissions due a settlement agreement with the City and County of San Francisco which led to redevelopment of the Site and ultimate development of the Project. Finally, a comparison between the Project GHG emissions (disaggregated year-by-year out to 2050) and avoided GHG emissions due to the closure of the Plant is presented which shows that the Project meets the GHG emissions requirements for AB900 CEQA streamlining. This document summarizes of the assumptions and calculation methodologies that were used to estimate GHG emissions.

Throughout this report, GHG emissions are reported in units of metric tons of carbon dioxide equivalents (MT CO<sub>2</sub>e). Carbon dioxide equivalents are emissions of carbon dioxide, methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), weighted by the global warming potentials (GWP) from Title 40 of the Code of Federal Regulations (CFR), Part 98, Table A-1, as referenced by the California Mandatory Reporting Rule for GHG (Title 17 of the California Code of Regulations, §§95100-95158). GHG emissions are quantified for this Project, operation of the Plant in its final years of operation, and one-time emissions associated with Project construction.

## 1.1 Project

The Proposed Project would be located at 1201A Illinois Street in San Francisco, California, just south of the area known as Pier 70 and east of the Potrero Hill and Dogpatch neighborhoods. It is the former Potrero Power Plant, bordered by 22nd Street to the north, the San Francisco Bay to the east, 23rd Street to the south and Illinois Street to the west. The Project site is comprised of a 21-acre Power Station site, a 4.8-acre site owned by Pacific Gas & Electric Company (PG&E), a 2.9-acre site owned by the Port of San Francisco (Port), a 0.18-acre site owned by a private party, and a less than 0.1-acre site owned by the City and County of San Francisco. Currently, the Power Station Site contains approximately 107,000 gross square feet (gsf) of vacant buildings and facilities that were used as warehouses, parking, vehicle storage, and office spaces. The PG&E site is currently used as a staging area for construction equipment and houses power transmission equipment.



Overall, the proposed project would construct up to approximately 5.4 million gross square feet (gsf), of uses, including between 2.4 and 3.0 million gsf of residential uses (about 2,400 to 3,000 dwelling units), between 1.2 and 1.9 million gsf of commercial uses (office, R&D/life science, retail, hotel, and PDR), and approximately 922,000, 100,000, and 25,000 gsf of parking, community facilities and entertainment/assembly uses, respectively. Most new buildings would range in height from 65 to 180 feet, with one building at 300 feet. Approximately 6.3 acres would be devoted to publicly accessible open space.

Project construction would likely occur in eight overlapping phases (Phase 0, Phase 0.1, and Phases 1 through 6), with each phase lasting approximately three to five years. Total construction is estimated to occur over a 15-year period, and is anticipated from the beginning of 2020 through 2034, as shown in **Table 1**. According to the Project phasing diagram shown in **Table 2**, the first operational year of the Project would be 2025 with the occupancy of Phase 1 buildings. The Project's GHG emissions inventory is also presented for each year from 2020 to 2050 in **Table 10**. Operational emissions from full Project buildout are expected to change each year due to the phase-in of the Renewable Portfolio Standard (RPS) goals and improved CO<sub>2</sub>e emission factors resulting from a more efficient vehicle fleet.

Methodologies for quantifying GHG emissions associated with Project operation are presented in Section 2.

## **1.2 One-Time Emissions**

Construction of the Project will generate "one-time" emissions, that is, discrete emissions that are not associated with ongoing Project operation. These emissions are quantified and disclosed for the Project. Methodologies for quantifying construction GHG emissions are detailed in Section 3. The project site, being primarily industrial in nature, currently has little vegetation other than occasional ruderal weeds, unmaintained vegetation, and a row of street trees site and on a short segment of the north side of 23rd Street (recently planted as part of PG&E's substation work on 23rd Street). Thus, any changes in carbon sequestration from changes in vegetation due to the Project will be minimal and are not quantified.

## **1.3 Emissions Sources**

**Table 3** lists the sources for which GHG emissions from the Project are quantified as well as the methodologies that were used. These will be further explained in Sections 2 and 3. For "one-time" construction emissions, Ramboll calculated GHG emissions from off-road equipment and harbor craft, on-road mobile construction vehicles, as well as electricity needed for electric off-road equipment and construction water supply. For operational emissions, Ramboll quantified GHG emissions from emergency generators and transportation refrigeration units (for potential use at grocery stores), electricity usage by wastewater treatment, on-road mobile sources from vehicle traffic and operational area sources including architectural coating, hearths, landscaping equipment, consumer products, and building energy use.

## 2. PROJECT OPERATIONAL EMISSIONS

The estimated GHG emissions from Project operation is shown in **Table 9**. GHG emissions are modeled for full buildout in 2034 as well as for each interim year when a new phase begins operations. The PPS Project will be built in several phases; as presented in **Table 1**, Phase 1 construction will be completed and start operating in year 2025 and subsequent interim phases (2, 3, 4, 5) will start operating in years 2026, 2028, 2031, and 2032, respectively. The full build out will start operating in 2034.

To estimate operational emissions, the year in which construction is completed for each Phase is modeled using the California Air Pollution Control Officers Association (CAPCOA)-developed model for land uses, California Emissions Estimator Model, version 2016.3.2 (CalEEMod®).<sup>1</sup> Emissions estimates from CalEEMod® are then scaled by expected changes in electricity GHG intensity and fleet-average GHG emission factors for each future year. This is shown in **Table 10**. Operational GHG emissions from area sources, natural gas use, waste, and generators were assumed to be the same as those in the start year of each overlapping phase because the emission factors do not vary by year.

At full buildout, the Project would emit 23,963 MT CO<sub>2</sub>e/year in operational emissions with mobile sources as the largest contributor of GHG emissions, followed by energy use.<sup>2</sup>

### 2.1 Energy

Energy usage from the Project was estimated using in CalEEMod® with Project-specific type and size of land uses corresponding to a minimum residential/maximum commercial development scenario. User-defined inputs for project location, operational year, and climate zone were also used. The energy emissions estimates consider emissions from two processes, electricity generation and natural gas combustion, with further details in Section 2.1.1 and 2.1.2 below.

#### 2.1.1 Electricity

Determining GHG emissions from electricity generation requires an emission factor correlating megawatt-hours (MWh) of electricity consumed to MT CO<sub>2</sub>e. The emission factor for GHG from electricity production for customers of the Pacific Gas and Electric Company (PG&E) is derived for future years in **Table 4**. The GHG intensity factor for total electricity energy delivered in future years are based on the historical carbon intensity of PG&E energy delivery from the most recent three years (2014, 2015 and 2016) and projected Renewables Power Standard (RPS) goals for 2020, 2030 and 2050. **Table 5** shows the difference between the CalEEMod® default electricity intensity factor (based on 2008 data) and the projected intensity factors (at modeled operation years) which account for the RPS. The CH<sub>4</sub>

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<sup>1</sup> CalEEMod® calculates annual GHG emissions which can be used in support of analyses in environmental documents such as Environmental Impact Reports (EIRs) and Negative Declarations used to support a California Environmental Quality Act (CEQA) evaluation. CalEEMod® utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the United States Environmental Protection Agency (USEPA) AP-42 emission factors, California Air Resources Board (ARB) onroad and offroad equipment emission models such as the Emission FACTor 2011 model (EMFAC2011) and the Offroad Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission (CEC) and Calrecycle. Available at: <http://www.caleemod.com/>

<sup>2</sup> The first operational year at full buildout will be in 2034. Total emissions during that year are 24,489 MT CO<sub>2</sub>e/year, which includes 523 MT CO<sub>2</sub>e/year in construction emissions.

and N<sub>2</sub>O emission factors are the same as those used in CalEEMod®. The electricity GHG intensity factor for interim years in between 2020, 2030 and 2050, shown in **Table 10**, are linearly interpolated between the intensity factors derived in **Table 4**.

Electricity usage is taken from the Project CalEEMod outputs using CalEEMod defaults and scaled up by a ratio of 1.4 to reflect higher building electricity demand estimates by the Project sponsor for the full build out. The scaling factor of 1.4 is calculated using the build out electricity demand estimated by the Sponsor (53,632 kwh/year) divided by the CalEEMod estimates (39,092 kwh/year).

Emissions from electricity use are the product of the annual electricity use and the GHG emission factor derived for that year.

### **2.1.2 Natural Gas**

Emissions from natural gas use are estimated using CalEEMod® default values for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emission factors from natural gas combustion and natural gas demand based on default CalEEMod® energy intensities for Project-specific type and size of land uses corresponding to a minimum residential/maximum office development scenario and user-defined inputs for project location, operational year, and climate zone.

## **2.2 Mobile Sources**

Mobile-source emissions would result from vehicle trips (auto and truck) associated with the proposed project and were calculated using the CalEEMod® model based on the number of vehicle trips identified in the transportation impact study prepared for the project.<sup>3</sup>

As discussed above, CalEEMod® is used to model GHG emissions from mobile sources corresponding to the starting operational year for each phase (Phase 1 - 2025; Phases 1 to 2 - 2026; Phases 1 to 3 - 2028; Phases 1 to 4 - 2031; Phases 1 to 5 - 2032) and build out year (Phases 1 to 6 - 2034). Mobile-source GHG emissions in the interim years in between the modeled years, shown in **Table 10**, are adjusted using the year-to-year percentage change in fleet-average GHG emission factor from EMFAC2014.

## **2.3 Waste**

Solid waste treatment releases GHG, primarily methane, as a result of decomposition. Emissions from solid waste treatment are estimated using CalEEMod® default values for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emission factors and default CalEEMod® solid waste disposal rates for Project-specific type and size of land uses corresponding to a minimum residential/maximum office/maximum hotel development scenario and user-defined inputs for project location, operational year, and climate zone.

## **2.4 Water**

Water treatment and transport results in direct and indirect emissions of GHGs. Indirect GHG emissions are generated from electricity needed to supply, treat and distribute water as well as electricity required to treat wastewater. Direct GHG emissions result from septic tank, aerobic and facultative lagoon wastewater treatment. Emission factors are based on CalEEMod® defaults.

Indoor and outdoor water use is based on default CalEEMod® water use rates for Project-specific type and size of land uses corresponding to a minimum residential/maximum office

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<sup>3</sup> Adavant Consulting, Memorandum: Potrero Power Station Mixed-use Development Project Estimation of Project Travel Demand, December 1, 2017.

development scenario and user-defined inputs for project location, operational year, and climate zone.

GHG emissions from water usage are the product of water used per year and the CO<sub>2</sub>e emission factors for water use and treatment.

## **2.5 Area Sources**

The Project includes area sources such as landscaping equipment. GHG emissions from area sources were estimated using CalEEMod® for Project-specific type and size of land uses corresponding to a minimum residential/maximum office development scenario and user-defined inputs for project location, operational year, and climate zone.

## **2.6 Emergency Generators**

Potential diesel fuel consumption from 15 emergency diesel generators (stationary sources) were estimated based on their horsepower rating and a fuel consumption rate of 0.05 gallons/horsepower-hour<sup>4</sup> as shown in **Table 8**. The analysis conservatively assumes that each parcel with designated building height limits in excess of 75 feet would require such equipment. All emergency generators range in size from 120 kilowatts (kW) to 2,000 kW as per information provided by the project sponsor. It was assumed that proposed generators would operate 50 hours per year (consistent with BAAQMD permitting limits).

GHG emissions from operational emergency generators are the product of diesel fuel consumption per year and the CO<sub>2</sub>e emission factors for operational generators. The GHG emission factor for operational generators are taken from the US EPA's Emission Factors for Greenhouse Gas Inventories.<sup>5</sup>

## **2.7 Transportation Refrigeration Units (TRUs)**

GHG emissions from transportation refrigeration units (TRUs) were estimated for refrigerated trucks servicing the grocery store anticipated to be built in Block 5 (Phase 4).

TRU emissions were calculated using the engine operating hours multiplied by the engine size, load factor, and GHG emission factors from California Air Resources Board OFFROAD2017 and OFFROAD2007 model. Fleet-average CO<sub>2</sub> emission factors are based on year 2031 (the first year of operation of Phase 4) and are conservative estimates for future years when TRU engines are expected to become more efficient.

Operating hours were estimated based on the truck travel time plus unloading time. Truck travel time is calculated as distance based on CalEEMod® default value of 7.3 miles per one-way trip for a Commercial Non-Work Trip, divided by the travel speed of 10 miles per hour, assuming 5 trucks per day. Loading time is based on average delivery time of 27 minutes from McCormack et al. (2010).<sup>6</sup> The Project proposes a mitigation option to plug in TRUs during unloading, which would reduce diesel combustion GHG emissions and is expected to

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<sup>4</sup> Fuel use factor of 0.05 gallons/horsepower-hour is based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.

<sup>5</sup> US EPA's Emission Factors for Greenhouse Gas Inventories, available at [https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf)

<sup>6</sup> McCormack et al. (2010). "Truck Trip Generation by Grocery Stores", prepared by University of Washington for Transportation Northwest (TransNow) and Washington State Department of Transportation. Available online at: <http://www.wsdot.wa.gov/NR/rdonlyres/E7164661-25E6-421B-B828-C2EF5F909180/0/TruckTripGenerationGroceryStoresreportAugust2010.pdf>

offset any increase electricity GHG. However, the emissions estimated for the purposes of CEQA streamlining do not include this mitigation option and are therefore conservative.

### 3. ONE-TIME CONSTRUCTION EMISSIONS

The Project construction energy usage is shown in **Table 7** by construction phase for water usage, electric off-road equipment, diesel usage for off-road and on-road equipment and gasoline usage for on-road construction vehicles. Also shown in **Table 7** are the GHG emission factors used calculate GHG emissions from the corresponding energy use. Construction GHG emissions are assumed to occur uniformly throughout the duration of each phase and are correspondingly disaggregated by year in **Table 10**.

#### 3.1 Off-Road Diesel Equipment

Ramboll estimated GHG emissions from construction equipment as the product of the equipment horsepower, total hours of operation, load factor, and CO<sub>2</sub> emission factor.

Project-specific construction equipment inventories that include details on the type, quantity, size, and hours of operation anticipated for each piece of equipment were provided by the construction contractor. In-water equipment usage was estimated using the methodology from the ARB's Emissions Estimation Methodology for Commercial Harbor Craft Operating in California.<sup>7</sup> Where required, Ramboll used CalEEMod<sup>®</sup> defaults for equipment load factors.

A diesel fuel consumption rate of 0.05 gallons/horsepower-hour<sup>8</sup> was assumed and GHG emission factors (tabulated in **Table 7**) were taken from the US EPA's Emission Factors for Greenhouse Gas Inventories.<sup>96</sup>

#### 3.2 Construction Water Usage

Water usage during construction is required for dust control during operation of off-road equipment including tractors, loaders, graders, scrapers, backhoes and dozers. Equipment type, usage hours per day and days per phase were provided by the construction contractor. CalEEMod<sup>®</sup> defaults for soil disturbed per day<sup>10</sup> and water application rate of 3,020 gal/acre/day<sup>11</sup> is used to calculate total water usage.

Electricity use is calculated based on the CalEEMod<sup>®</sup> default BAAQMD energy intensity of 0.005411 kWh per gallon for supply, distribution, and treatment of water, and GHG emissions are calculated by multiplying total electricity use in a given year by the corresponding electricity GHG intensity projected for that year.

#### 3.3 Electric Construction Equipment

Electric construction equipment is primarily used during building construction phases such as saws, impact guns and tower cranes.<sup>12</sup> Since information on electric construction equipment

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<sup>7</sup> California Air Resources Board. 2007. Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. Available at: <https://www.arb.ca.gov/regact/2010/chc10/appc.pdf>

<sup>8</sup> Fuel use factor of 0.05 gallons/horsepower-hour is based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.

<sup>9</sup> US EPA's Emission Factors for Greenhouse Gas Inventories, available at [https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf)

<sup>10</sup> Acres disturbed per day calculated from CalEEMod<sup>®</sup> Appendix A and Appendix D Table 3.7.

<sup>11</sup> Air & Waste Management Association. 1992. Air Pollution Engineering Manual.

<sup>12</sup> "Analysis of Energy Use Associated with the Proposed Golden State Warriors Project, San Francisco, California", Ramboll Environ. 2015. Available online at: [http://www.gsweventcenter.com/GSW\\_RTC\\_References/2015\\_1019\\_Ramboll\\_Environ.pdf](http://www.gsweventcenter.com/GSW_RTC_References/2015_1019_Ramboll_Environ.pdf). Accessed June 25, 2018.



was not available from the construction contractor, Ramboll estimated construction equipment electricity use by scaling in proportion to project building square footage from the Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR. Electric construction equipment is not expected to be used during the first two years of construction when site grading occurs when building construction does not occur.

Year-by-year GHG emissions are calculated based on the electricity GHG intensity projected for each year.

### 3.4 Construction Trips

GHG emissions from on-road construction trips were calculated using the total number of worker, vendor and haul truck trips provided by the construction contractor.

Diesel fuel usage from on-road sources during construction was calculated from vendor and haul trips during each phase, and is shown in **Table 7**. For haul trucks, a 20-mile one-way trip length was used, based on CalEEMod<sup>®</sup> default truck trip lengths, and for vendor trucks a 7.3-mile trip length was used, based on the regional default vendor trip length from CalEEMod<sup>®</sup>. The fleet mix and fleet-average fuel efficiency for on-road vehicles operating during each sub-phase was obtained from ARB's Emission FACtor model (EMFAC2014) for the starting year of each sub-phase. Diesel GHG emission factors for on-road sources are taken from the California ARB Low Carbon Fuel Standard GREET model simulation for the ultra-low sulfur diesel production pathway.<sup>13</sup>

Gasoline fuel usage from on-road sources during construction was calculated from worker trips during each Phase, and is shown in **Table 7**. A default trip length of 10.8 miles from CalEEMod<sup>®</sup> was used. The fleet mix and fleet-average fuel efficiency for on-road vehicles operating during each sub-phase was obtained from EMFAC2014 for the starting year of each sub-phase. Gasoline GHG emission factors are taken from the California ARB Low Carbon Fuel Standard GREET model simulation for California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) production pathway.<sup>14</sup>

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<sup>13</sup> California ARB Low Carbon Fuel Standard GREET model simulation for the ultra-low sulfur diesel production pathway, available at <https://www.arb.ca.gov/fuels/lcfs/121514ulsd.pdf>

<sup>14</sup> California ARB Low Carbon Fuel Standard GREET model simulation for California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) production pathway, available at <https://www.arb.ca.gov/fuels/lcfs/121514carbob.pdf>

## 4. COMPARISON OF NET GHG EMISSIONS

### 4.1 Project GHG Emissions

**Table 10** shows the year-by-year Project GHG emissions between 2020 and 2050. The maximum yearly GHG emissions is 24,489 MT CO<sub>2</sub>e per year occurring in 2034, with operational emissions declining in subsequent years due to cleaner electricity and improved vehicle fuel economy.

### 4.2 Avoided GHG Emissions due to Closure of the Plant

The Plant shut down in January 2011, after completion of the Trans Bay Cable which provided the City of San Francisco with sufficient power as mandated by the California Independent System Operator (CAISO).<sup>15</sup> The Trans Bay Cable connects the Potrero Substation to the Pittsburg Substation in Pittsburg, CA. According to Trans Bay Cable, the Pittsburg Substation “receives power through transmission lines from many other power plants” including renewable sources.

Ramboll estimated the amount of GHG emissions avoided by closure of the Plant using the GHG intensity of electricity delivered by Pacific Gas & Electric (PG&E) – the main electricity supplier to the city of San Francisco – together with operational statistics of the Plant in the years leading up to its closure. Between 2011 and 2015, the GHG intensity of electricity supplied by PG&E averaged 423 lb CO<sub>2</sub>e/MWh, as shown in **Table 12**.<sup>16</sup> US Energy Information Administration (US EIA) survey Form EIA-923 statistics indicate that, in the period 2001-2010 leading up to closure, the Plant produced between 385,621 to 1,135,034 MWh/year at an average carbon intensity of 1,259 lb CO<sub>2</sub>e/MWh (see **Table 11**).<sup>17</sup> The replacement of the Plant with electricity from the PG&E grid (which is supplied by newer and more efficient natural gas and renewable-source power plants) resulted in approximately a factor of 3 reduction in GHG intensity of electricity, leading to 146,226 to 430,401 MT CO<sub>2</sub>e avoided per year depending on the amount of electricity generated by the Plant as shown in **Table 12**.

### 4.3 Comparison of GHG Emissions

The comparison between Project GHG emissions and avoided GHG emissions from closure of the Plant shows that, even under the most restrictive case, maximum annual Project GHG emissions are approximately 17% of the minimum avoided annual GHG emissions from Plant closure.

### 4.4 Demonstration of No Net Additional Emissions of Greenhouse Gases

In support of this Application, Ramboll quantified both direct and indirect greenhouse gas emissions associated with the Project’s construction and operation, to show the Project meets the requirement for no “net additional emission of greenhouse gases [GHG], including greenhouse gas emissions from employee transportation” [California PRC §21183(c)]. **Table 10** shows the year-by-year Project GHG emissions from 2020 to 2050, starting at a

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<sup>15</sup> “2010 Local Capacity Technical Analysis”, California Independent System Operator, April 2009.  
<http://www.caiso.com/Documents/Draft2010LCTStudyReport07-Apr-2009.pdf>.

<sup>16</sup> Data obtained from The Climate Registry CRIS Public Reports (<https://www.theclimateregistry.org/our-members/cris-public-reports/>), also provided by PG&E (<http://www.pgecurrents.com/2015/01/30/pge-cuts-carbon-emissions-with-clean-energy/>).

<sup>17</sup> Detailed Electric Power Data (survey Form EIA-923), USEIA (2017).  
<https://www.eia.gov/electricity/data/eia923/>.

minimum of 2,183 MT CO<sub>2</sub>e/year during the first year of construction. The maximum annual emissions occur in 2034 at 24,489 MT CO<sub>2</sub>e/year and emissions decrease steadily to 20,339 MT CO<sub>2</sub>e/year by 2050. Annual Project emissions never exceed the baseline considered here, the avoided annual GHG emissions from Plant closure conservatively estimated at 146,226 MT CO<sub>2</sub>e/year. Therefore, there is a net reduction in GHG emissions for each year considered in this analysis.

One-time emissions from construction are included with the continual operational emissions in the evaluation against the baseline for this Project. Unlike projects where baseline activities are simply relocated, the baseline activity for this Project is the operation of a power plant that was shut down. There was no additional construction associated with moving the power plant to another location.

## TABLES

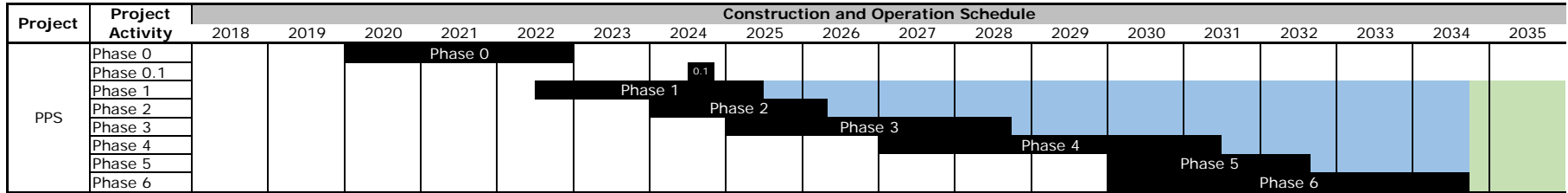
**Table 1: Project Construction Phasing**  
**Potrero Power Station Mixed-Use Development Project**  
**San Francisco, California**

Phase <sup>1</sup>	Description	Start Year	End Year	# of Work Days
0	Demolition, Site preparation, and Rough Grading for the entire Project	January 2020	December 2022	782
0.1	Tank farm area subject to future PG&E remediation efforts	July 2024	October 2024	87
1	Grading, Building Construction (Blocks 8, 9, 12), Paving, Architectural Coating	July 2022	June 2025	782
2	Building Construction (Blocks 7, 11), Paving, Architectural Coating	January 2024	April 2026	607
3	Grading, Building Construction (Blocks 3, 4), Paving, Architectural Coating	January 2025	September 2028	977
4	Grading, Building Construction (Blocks 5, 6, 10), Paving, Architectural Coating	January 2027	July 2031	1194
5	Grading, Building Construction (Blocks 1, 2, 14), Paving, Architectural Coating	January 2030	August 2032	695
6	Grading, Building Construction (Block 13), Paving, Architectural Coating	January 2030	September 2034	1238

**Notes:**

<sup>1</sup> Project construction schedule provided by the Project Sponsor. Phase 0.1 is included within the boundary of Phase 0 but is subject to PG&E remediation efforts which could impact schedule for completion of work in this area.

**Table 2: Phasing Diagram for PPS Project**  
**Potrero Power Station Mixed-Use Development Project**  
**San Francisco, California**



Legend:

- Construction Activity
- Operational Build-Out Year
- Operational Activity



**Table 3: Energy and Fuel Use Calculation Methods**  
**Potrero Power Station Mixed-Use Development Project**  
**San Francisco, California**

Type	Source	Methodology and Formula	Reference
Construction Equipment	Diesel Off-Road Equipment <sup>1</sup>	$F_c = \Sigma(FF_c * HP * LF * Hr * C)$	OFFROAD2011 and ARB/USEPA Engine Standards
	Electric Off-Road Equipment	Estimated based on Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR	--
	Water Usage <sup>2</sup>	$E_w = \Sigma(AR * A * EI)$	CalEEMod 2016.3.2
	Harbor Craft (barges and tugs) <sup>3</sup>	$F_b = FF_0 * F * (1 + D * A / UL) * HP * LF * Hr$	ARB Commercial Harborcraft (CHC) Inventory
Construction On-Road Mobile Sources <sup>4</sup>	Exhaust – Running	$F_R = \Sigma(VMT * C / FF_R)$ , where VMT = Trip Length * Trip Number	EMFAC2014
Operational Generator Emissions <sup>5</sup>	Stationary Source	$F_{SS} = FF_{SS} * HP * LF * Hr * C$	--
Operational Wastewater Treatment <sup>6</sup>	Stationary Source	$E_{ww} = (EI_S + EI_T + EI_D) * (W_I + W_O) + EI_{T,W} * W_I$	CalEEMod 2016.3.2
Operational On-Road Mobile Sources	Exhaust - Running	Estimated using CalEEMod, see User's Guide.	CalEEMod 2016.3.2
Operational Transportation Refrigeration Unit <sup>7</sup>	TRU Engine Exhaust	$E_t = \Sigma(EF_t * HP * LF * Hr)$	OFFROAD 2007 and OFFROAD2017
Operational Area Sources <sup>8</sup>	Area sources including architectural coating, hearths, landscaping equipment, consumer products, and building energy use.	Various CalEEMod Methods, see User's Guide.	CalEEMod 2016.3.2

**Notes:**

<sup>1</sup>  $F_c$ : off-road equipment diesel fuel use (gal).

$FF_c$ : fuel use factor (gal/hp-hr) based on SCAQMD CEQA Air Quality Handbook, Table A9-3E

HP: equipment horsepower, OFFROAD2011

LF: equipment load factor, OFFROAD2011

Hr: equipment hours

C: unit conversion factor

<sup>2</sup>  $E_w$ : Construction water energy use (kWh)

AR: Water application rate (gal/acre/day), CalEEMod

A: Acres disturbed per day per equipment, CalEEMod

EI: BAAQMD energy intensity for supply, distribution, and treatment of water, CalEEMod® default

<sup>3</sup>  $F_b$ : harbor craft fuel use (gal)

$FF_0$ : fuel use factor (gal/hp-hr) based on SCAQMD CEQA Air Quality Handbook, Table A9-3E

F: fuel correction factor from the CHC Inventory

D: engine deterioration factor from the CHC Inventory

A: engine age provided by the construction contractor

UL: engine useful life from the CHC Inventory

HP: equipment horsepower provided by the construction contractor

LF: equipment load factor from the CHC Inventory

Hr: hours of operation per day provided by the construction contractor

**Table 3: Energy and Fuel Use Calculation Methods  
Potrero Power Station Mixed-Use Development Project  
San Francisco, California**

4. On-road mobile sources include truck and passenger vehicle trips. Emissions associated with mobile sources were calculated using the following formulas.  
 $F_R$ : Vehicle Fuel use (gal).  
 $FF_R$ : Fleet average fuel economy (mile/gal). From EMFAC2014.  
 $VM_T$ : vehicle miles traveled  
 $C$ : unit conversion factor  
 The calculation involves the following assumptions:  
 a. All material transporting and soil hauling trucks are heavy-heavy duty trucks.  
 b. Trip Length: The one-way trip length as calculated based on the truck route or the default length from CalEEMod or construction contractor.  
 c. Trip Number: provided by the construction contractor or estimated in CalEEMod.
5. Operational emissions from the generator were calculated using the following formulas:  
 $F_{SS}$ : Stationary Source Fuel Use (gal).  
 $FF_{SS}$ : Stationary Source fuel use factor (gal/hp-hr) based on SCAQMD CEQA Air Quality Handbook, Table A9-3E  
 $HP$ : equipment horsepower  
 $Hr$ : hours of operation per year (hr)  
 $LF$ : equipment load factor  
 $C$ : unit conversion factor
6. Wastewater treatment energy use was calculated according to the following formulas:  
 $E_{WW}$ : Wastewater energy use (kWh)  
 $W_I$ : Indoor water usage (Mgal) estimated from CalEEMod.  
 $W_O$ : Outdoor water usage (Mgal) estimated from CalEEMod.  
 $E_{IS}$ : Energy Intensity Required to Supply Water (kWh/Mgal)  
 $E_{IT}$ : Energy Intensity Required to Treat Water (kWh/Mgal)  
 $E_{ID}$ : Energy Intensity Required to Distribute Water (kWh/Mgal)  
 $E_{I_{T,W}}$ : Energy Intensity Required to Treat Wastewater (kWh/Mgal)
5.  $E_t$ : TRU GHG Emissions (g CO<sub>2</sub>e).  
 $EF_t$ : GHG Emission factor (g/hp-hr) from ARB OFFROAD2017 model for TRU  
 $HP$ : equipment load factor from the CARB TRU inventory  
 $LF$ : equipment load factor from the CARB TRU inventory  
 $Hr$ : equipment running hours, including travel and unloading time where travel hours = trip length/travel speed, trip length from CalEEMod default, travel speed = 10 miles/hour, unloading time is based on average delivery time of 27 minutes from McCormack et al. (2010) "Truck Trip Generation by Grocery Stores", prepared by University of Washington.
7. Emissions for the various area sources were calculated using CalEEMod®.

#### **Abbreviations:**

ARB: California Air Resources Board	HP: horsepower
CHC: Commercial Harborcraft	lb: pound
FF: fuel use factor	LF: load factor
EMFAC: Emission FACTor Model	mi: mile
g: gram	USEPA: United States Environmental Protection Agency
gal: gallon	VM_T: vehicle miles traveled

#### **References:**

- ARB (2007). Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. Available online at: <https://www.arb.ca.gov/regact/2010/chc10/appc.pdf>
- ARB/USEPA. 2013. Table 1: ARB and USEPA Off-Road Compression-Ignition (Diesel) Engine Standards. Available online at: [http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road\\_Diesel\\_Stds.xls](http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road_Diesel_Stds.xls)
- ARB. 2014. Emission FACTors Model, 2014 (EMFAC2014). Available online at: <http://www.arb.ca.gov/emfac/2014/>
- CalEEMod® 2016.3.2. Available Online at: <http://www.caleemod.com>
- Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR, Analysis of Energy Use Associated with the Proposed Golden State Warriors Project. Available at: [http://www.gsweventcenter.com/GSW\\_RTC\\_References/2015\\_1019\\_Ramboll\\_Environ.pdf](http://www.gsweventcenter.com/GSW_RTC_References/2015_1019_Ramboll_Environ.pdf)
- McCormack et al. (2010). "Truck Trip Generation by Grocery Stores", prepared by University of Washington for Transportation Northwest (TransNow) and Washington State Department of Transportation. Available online at: <http://www.wsdot.wa.gov/NR/rdonlyres/E7164661-25E6-421B-B828-C2EF5F909180/0/TruckTripGenerationGroceryStoresreportAugust2010.pdf>

**Table 4: CO<sub>2</sub>e Intensity Factor Derivation, PGE  
Potrero Power Station Mixed-Use Development Project  
San Francisco, California**

	2014 <sup>1,2</sup>	2015 <sup>1,3</sup>	2016 <sup>1,4</sup>	Average <sup>5</sup>	Units
CO <sub>2</sub> Intensity Factor per Total Energy Delivered	435	405	294	378	lbs CO <sub>2</sub> /MWh delivered
% of Total Energy From Renewables	27%	29.5%	32.8%	30%	
CO <sub>2</sub> Intensity Factor for Total Non-Renewable Energy <sup>6</sup>	596	574	437	538	lbs CO <sub>2</sub> /MWh delivered
<b>Estimated Intensity Factor for Total Energy Delivered<sup>7,8</sup></b>					
2020 RPS (33%) <sup>9</sup>				360	lbs CO <sub>2</sub> /MWh delivered
				363	lbs CO <sub>2</sub> e/MWh delivered
2030 RPS (50%) <sup>10</sup>				269	lbs CO <sub>2</sub> /MWh delivered
				271	lbs CO <sub>2</sub> e/MWh delivered
2050 RPS (80%) <sup>11</sup>				108	lbs CO <sub>2</sub> /MWh delivered
				110	lbs CO <sub>2</sub> e/MWh delivered

**Notes:**

<sup>1</sup> Total CO<sub>2</sub> emission factor from The Climate Registry. Available at: <https://www.theclimateresistry.org/our-members/cris-public-reports/>. Accessed: December, 2017.

<sup>2</sup> Percent of total energy from eligible renewables is from the PGE 2015 Corporate Responsibility Report. Available at: [http://www.pgecorp.com/corp\\_responsibility/reports/2015/PGE\\_CRSR\\_2015.pdf](http://www.pgecorp.com/corp_responsibility/reports/2015/PGE_CRSR_2015.pdf).

<sup>3</sup> Percent of total energy from eligible renewables is from the PGE 2016 Corporate Responsibility Report. Available at: [http://www.pgecorp.com/corp\\_responsibility/reports/2016/PGE\\_CRSR\\_Environment.pdf](http://www.pgecorp.com/corp_responsibility/reports/2016/PGE_CRSR_Environment.pdf).

<sup>4</sup> Percent of total energy from eligible renewables is from the PGE 2017 Corporate Responsibility Report. Available at: [http://www.pgecorp.com/corp\\_responsibility/reports/2017/assets/PGE\\_CRSR\\_2017.pdf](http://www.pgecorp.com/corp_responsibility/reports/2017/assets/PGE_CRSR_2017.pdf)

<sup>5</sup> This average uses the most recent three years of data.

<sup>6</sup> The emissions metric presented here is calculated based on the total CO<sub>2</sub> intensity factor divided by the percent of energy delivered from non-renewable sources.

<sup>7</sup> The intensity factor for total energy delivered is estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO<sub>2</sub> emissions per total non-renewable energy metric calculated above. The estimate provided here and the energy reports issued by PGE assume that renewable energy sources do not result in any CO<sub>2</sub> emissions.

<sup>8</sup> Global Warming Potentials (GWP) are based on the IPCC Fourth Assessment Report. CH<sub>4</sub> and N<sub>2</sub>O emission factors are from the CalEEMod<sup>®</sup> version 2016.3.2 defaults for PGE, and are conservatively assumed not to change from these estimates. As more renewable energy is integrated into the electricity grid, these intensity factors will also decrease.

<sup>9</sup> Emission factor presented here is 33% projected RPS in 2020, consistent with SB350. Available at: <http://www.energy.ca.gov/portfolio/>.

<sup>10</sup> Emission factor presented here is 50% projected RPS for 2030 consistent with SB 32 and SB 350, as set forth by Executive Order S-14-08 and SB X1-2. Available at: <http://www.energy.ca.gov/sb350/>.

<sup>11</sup> Electricity load to reach 80% renewable in 2050, consistent with the Final CARB 2017 Scoping Plan Update, Appendix D PATHWAYS, pg 12 (November, 2017). Available at: [https://www.arb.ca.gov/cc/scopingplan/2030sp\\_appd\\_pathways\\_final.pdf](https://www.arb.ca.gov/cc/scopingplan/2030sp_appd_pathways_final.pdf)

**Abbreviations:**

CARB - California Air Resources Board

CO<sub>2</sub> - carbon dioxide

CO<sub>2</sub>e - carbon dioxide equivalent

GHG - greenhouse gases

IPCC - Intergovernmental Panel on Climate Change

lbs - pounds

MWh - megawatt-hour

RPS - Renewables Portfolio Standard

PGE - Pacific Gas & Electric

SB - Senate Bill

USEPA - US Environmental Protection Agency

**Table 5. Electricity Intensity Factor Comparison  
Potrero Power Station Mixed-Use Development Project  
San Francisco, California**

Phase <sup>1</sup>	Modeled Operation Year <sup>1</sup>	CO <sub>2</sub> e Intensity Factor (lbs CO <sub>2</sub> e/MWh delivered)		Ratio
		CalEEMod® Default <sup>2</sup>	Projected <sup>3</sup>	
1	2025	644	317	0.49
1 - 2	2026	644	308	0.48
1 - 3	2028	644	290	0.45
1 - 4	2031	644	263	0.41
1 - 5	2032	644	255	0.40
Build Out	2034	644	239	0.37

**Notes:**

<sup>1</sup> PPS Project will be built in several phases. As presented in Table 1, Phase 1 construction will be completed and start operating in year 2025. Subsequent interim phases (2, 3, 4, 5) will start operating in years 2026, 2028, 2031, and 2032, respectively. The full build out will start operating in 2034. To estimate the operation emissions, the year in which construction is completed for each Phase is modeled using CalEEMod®. This is conservative because emissions are likely to be lowered in subsequent years of operation due to cleaner vehicles and lowered carbon intensity of electricity generation.

<sup>2</sup> The CalEEMod® default electricity intensity factor is based on 2008 data. This was used in the CalEEMod® runs for the EIR.

<sup>3</sup> The projected CO<sub>2</sub> intensity factor is derived based on a linear trajectory for electricity to reach RPS target (33% RPS in 2020, 50% RPS in 2030, and 80% RPS in 2050).

**Abbreviations:**

CO<sub>2</sub>e - carbon dioxide equivalent  
EIR - Environmental Impact Report  
lbs - pounds  
MWh - megawatt-hour  
PGE - Pacific Gas & Electric

**Table 6. Direct Wastewater GHG Emissions Calculation**  
**Potrero Power Station Mixed-Use Development Project**  
**San Francisco, California**

Category	Phase 1	Phase 1 - 2	Phase 1 - 3	Phase 1 - 4	Phase 1 - 5	Build Out	Units
<b>Modeled Year</b>	2025	2026	2028	2031	2032	2034	--
<b>Water Use (Mgal)<sup>1</sup></b>	108	215	418	562	785	858	Mgal/yr
Indoor Water	73	141	327	420	619	664	Mgal/yr
Outdoor Water	35	74	91	142	166	194	Mgal/yr
<b>Indirect Emissions Associated with Water<sup>2</sup></b>							
Electricity to Supply Water	2,117	2,117	2,117	2,117	2,117	2,117	kWh/Mgal
Electricity to Treat Water	111	111	111	111	111	111	kWh/Mgal
Electricity to Distribute Water	1,272	1,272	1,272	1,272	1,272	1,272	kWh/Mgal
Electricity to Treat Wastewater	1,911	1,911	1,911	1,911	1,911	1,911	kWh/Mgal
CO <sub>2</sub> e Intensity Factor	317	308	290	263	255	239	lb CO <sub>2</sub> e/MWh
Indirect Emissions from Phase	75	143	275	331	455	464	MT CO <sub>2</sub> e/yr
<b>Direct Emissions Associated with Wastewater<sup>3</sup></b>							
Septic Tank Emission Factor	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	MT CO <sub>2</sub> e/gal
Aerobic Emission Factor	6.1E-07	6.1E-07	6.1E-07	6.1E-07	6.1E-07	6.1E-07	MT CO <sub>2</sub> e/gal
Facultative Lagoon Emission Factor	9.7E-06	9.7E-06	9.7E-06	9.7E-06	9.7E-06	9.7E-06	MT CO <sub>2</sub> e/gal
Direct Emissions from Phase	100	192	445	572	843	904	MT CO <sub>2</sub> e/yr
<b>Total Water Emissions from Phase</b>	174	335	720	903	1,298	1,367	MT CO <sub>2</sub> e/yr

**Notes:**

<sup>1</sup> Water use from CalEEMod output.

<sup>2</sup> Indirect emissions associated with water use are calculated using CalEEMod® default electricity usage factors for San Francisco County and electricity GHG intensity calculated in Table 5.

<sup>3</sup> Emissions are calculated based on the CalEEMod® default factors for San Francisco County. Direct emissions are based on a default split between septic tank, aerobic, and anaerobic wastewater treatment types (10.33%, 87.46%, and 2.21% respectively), as shown in CalEEMod® Appendix D Table 9.4. The gas produced by anaerobic digesters may be flared or sent to a cogeneration process; in this calculation, it is assumed all gas is flared or released as fugitive methane, as this is the default described in CalEEMod® Appendix A section 8.4.

**Abbreviations:**

CalEEMod® - CALifornia Emissions Estimator MODel

CO<sub>2</sub>e - carbon dioxide equivalents

GHG - greenhouse gases

lb - pound

kWh - kilowatt-hour

Mgal - million gallons

MT - metric tonnes

MWh - megawatt-hour

yr - year

**Table 7. Construction Energy Use and GHG Emission Factors**  
**Potrero Power Station Mixed-Use Development Project**  
**San Francisco, California**

Construction Energy Use					
Project Activity	Water Transportation (kwh) <sup>1</sup>	Electric Off-Road (kWh) <sup>2</sup>	Diesel Construction Off-Road (gallon) <sup>3</sup>	Diesel Construction On-Road (gallon) <sup>4</sup>	Gasoline Construction On-Road (gallon) <sup>5</sup>
Phase 0	46,963	0	492,784	108,775	39,542
Phase 0.1	3,026	0	17,980	34,950	871
Phase 1	33,418	232,223	774,731	73,200	78,403
Phase 2	8,410	182,485	278,882	27,353	26,085
Phase 3	17,879	152,616	504,144	36,596	39,219
Phase 4	22,806	332,527	723,427	54,310	60,215
Phase 5	13,298	235,792	385,226	42,879	30,555
Phase 6	9,084	215,525	278,031	26,680	21,260

Source	Fuel	GHG Emission Factor <sup>6</sup>			
		CO2	CH4	N2O	Unit
Project Off-Road Construction Equipment <sup>3</sup>	Diesel	10.21	0.00057	0.00026	kg/gal
Project On-Road Construction Vehicles <sup>4</sup>	Diesel	74.1	0.76		g CO2e/MJ
Project On-Road Construction Trips <sup>5</sup>	Gasoline	72.89	1.05		g CO2e/MJ

**Notes:**

- Water use during construction is estimated based on the acres disturbed per day calculated from CalEEMod® Appendix A and Appendix D Table 3.7 with an application rate of 3,020 gal/acre/day (AWMA 1992). Electricity use was then calculated based on the CalEEMod® default BAAQMD energy intensity of 0.005411 kWh per gallon for supply, distribution, and treatment of water. Year-by-year GHG emissions are calculated based on the electricity carbon intensity calculated in Table 10.
- Electricity consumption for off-road construction equipment was scaled according to project building square footage from the Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR. Electric construction equipment are not expected to be used during the first two years of construction when site grading occurs since these equipment are primarily used only during building construction phases. Year-by-year GHG emissions are calculated based on the electricity carbon intensity calculated in Table 10.
- Diesel fuel usage from off-road construction equipment is calculated using the construction equipment list provided by the Project Sponsor, equipment horsepower, the expected number of hours of use and a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E. Emission factors for off-road construction equipment are taken from the US EPA's Emission Factors for Greenhouse Gas Inventories, available at [https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf).
- Diesel fuel usage from on-road sources during construction was calculated from vendor and haul trips during each Phase. The fleet mix and fleet-average fuel efficiency for on-road vehicles operating during each sub-phase was obtained from EMFAC2014 for the starting year of each sub-phase. Diesel GHG emission factors for on-road sources are taken from the California ARB Low Carbon Fuel Standard GREET model simulation for the ultra-low sulfur diesel production pathway, available at <https://www.arb.ca.gov/fuels/lcfs/121514ulsd.pdf>. The heating value for diesel fuel is assumed to be 127,500 BTU/gallon ([http://www.energy.ca.gov/almanac/transportation\\_data/gge.html](http://www.energy.ca.gov/almanac/transportation_data/gge.html)).

**Table 7. Construction Energy Use and GHG Emission Factors  
Potrero Power Station Mixed-Use Development Project  
San Francisco, California**

5. Gasoline fuel usage from on-road sources during construction was calculated from worker trips during each Phase. The fleet mix and fleet-average fuel efficiency for on-road vehicles operating during each sub-phase was obtained from EMFAC2014 for the starting year of each sub-phase. Gasoline GHG emission factors are taken from the California ARB Low Carbon Fuel Standard GREET model simulation for California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) production pathway, available at <https://www.arb.ca.gov/fuels/lcfs/121514carbob.pdf>. The heating value for gasoline fuel is assumed to be 111,800 BTU/gallon ([http://www.energy.ca.gov/almanac/transportation\\_data/gge.html](http://www.energy.ca.gov/almanac/transportation_data/gge.html)).
6. GHG emission factors are calculated on a CO<sub>2</sub>e basis assuming Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report.

**Abbreviations:**

AWMA - Air & Waste Management Association  
 EMFAC - Emission FACtor Model  
 IPCC - Intergovernmental Panel on Climate Change  
 SCAQMD - South Coast Air Quality Management District

**References:**

Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR, Analysis of Energy Use Associated with the Proposed Golden State Warriors Project. Available at:  
[http://www.gsweventcenter.com/GSW\\_RTC\\_References/2015\\_1019\\_Ramboll\\_Environ.pdf](http://www.gsweventcenter.com/GSW_RTC_References/2015_1019_Ramboll_Environ.pdf)



**Table 8. Operational Generator Fuel Use and GHG Emissions  
Potrero Power Station Mixed-Use Development Project  
San Francisco, California**

Building Block	Phase	Fuel	Size (hp)	Fuel Consumption (gal/yr) <sup>1</sup>	GHG Emissions <sup>2</sup>
					(MT/yr)
1B	5	Diesel	1,006	1,624	17
5B	4	Diesel	1,341	2,666	27
6	4	Diesel	1,006	1,825	19
7B	2	Diesel	671	1,510	15
8	1	Diesel	671	1,598	16
14	5	Diesel	402	813	8
2	5	Diesel	2,682	10,076	103
3	3	Diesel	2,682	10,047	103
10	4	Diesel	1,006	1,815	19
11	2	Diesel	1,006	1,796	18
12	1	Diesel	1,006	1,780	18
9	1	Diesel	671	1,140	12
SPS	1	Diesel	161	402	4

**Notes:**

- <sup>1</sup>. Diesel use from backup generators was calculated from the horsepower rating provided by the Project Sponsor, assuming 50 hours/year/generator (consistent with the Project EIR Air Quality analysis) and 0.05 gallons/horsepower-hour (consistent with construction equipment fuel use).
- <sup>2</sup>. Emission factors for operational generators are taken from the US EPA's Emission Factors for Greenhouse Gas Inventories, available at [https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf).

**Abbreviations:**

gal - gallon  
hp - horsepower  
MT - metric tonnes

**Table 9. Greenhouse Gas Operational Unmitigated Emissions Summary**  
**Potrero Power Station Mixed-Use Development Project**  
**San Francisco, California**

Phase	GHG Emissions <sup>1</sup>									
	Modeled Operational year	Area	Electricity <sup>2</sup>	Natural Gas	Mobile	TRU <sup>3</sup>	Generators	Waste	Water <sup>3</sup>	Total
1	2025	25	1,599	1,102	4,042	0	50	430	174	7,422
1 - 2	2026	54	2,623	1,574	5,563	0	84	724	335	10,958
1 - 3	2028	54	3,418	2,181	6,247	0	187	839	720	13,646
1 - 4	2031	99	4,771	2,857	8,211	2.0	252	1,273	903	18,367
1 - 5	2032	126	5,553	3,584	9,438	2.0	380	1,508	1,298	21,888
Build Out	2034	171	5,818	3,954	10,467	2.0	380	1,803	1,367	23,963

**Notes:**

<sup>1</sup> GHG emissions are taken from the proposed Project CalEEMod® Outputs except for Generators and TRUs which are calculated using methods described in Table 3. Electricity and water emissions have been adjusted to reflect the projected PGE CO<sub>2</sub>e intensity factor for modeled operation year in CalEEMod. This derivation is shown in Tables 4 and 5. Construction emissions are shown separately in Table 7.

<sup>2</sup> Electricity usage is first taken from the Project CalEEMod outputs using CalEEMod defaults and scaled up by a ratio of 1.4 to reflect higher building electricity demand estimate by the Project sponsor for the full build out. The scaling factor of 1.4 is calculated using the build out electricity demand estimated by the Sponsor (53,632 kwh/year) divided by the CalEEMod estimates (39,092 kwh/year). GHG emissions related to building electricity use are calculated based on the electricity use and CO<sub>2</sub>e intensity factor in Table 5.

<sup>3</sup> Based on the project description, Block 5 (Phase 4) is identified as a potential location for a grocery store. Therefore, TRU emissions associated with grocery operation will occur starting phase 4 operation. TRU emissions were calculated using the engine operating hours multiplied by the engine size, load factor, and GHG emission factors from California Air Resources Board OFFROAD2017 and OFFROAD2007 model. The emission factors are based on year 2031 (the first year of operation) and are conservative estimates for future years when TRU engines are expected to become more efficient. Operating hours were estimated based on the truck travel time plus unloading time; truck travel time is calculated as distance based on CalEEMod default value of 7.3 miles per one way trip for a Commercial-NonWork Trip, divided by the travel speed of 10 miles per hour, assuming 5 trucks per day. Loading time is based on average delivery time of 27 minutes from McCormack et al. (2010) "Truck Trip Generation by Grocery Stores", prepared by University of Washington. Emissions shown in this table are unmitigated and are therefore conservative; the Project proposes a mitigation option to plug in TRUs during unloading, which would reduce diesel combustion GHG emissions and is expected to offset any increase electricity GHG.

<sup>4</sup> Water GHG emissions include indirect emissions from the electricity needed to supply, treat, distribute water and treat wastewater as well as direct emissions from wastewater.

**Abbreviations:**

AB900 - Assembly Bill 900

CalEEMod® - CALifornia Emissions Estimator MODel

CO<sub>2</sub>e - carbon dioxide equivalents

GHG - greenhouse gases

kwh - kilowatt-hour

MT - metric tonnes

yr - year

**References:**

CalEEMod® 2016.3.2. Available Online at: <http://www.caleemod.com>

McCormack et al. (2010). "Truck Trip Generation by Grocery Stores", prepared by University of Washington for Transportation Northwest (TransNow) and Washington State Department of Transportation. Available online at: <http://www.wsdot.wa.gov/NR/rdonlyres/E7164661-25E6-421B-B828-C2EF5F909180/0/TruckTripGenerationGroceryStoresreportAugust2010.pdf>

Table 10. Project CO2e Emissions by Year  
 Potrero Power Station Mixed-Use Development Project  
 San Francisco, California

Year	CO2e Intensity Factor (lb CO2e/MWh) <sup>1</sup>	Fleet CO2e EF (g/mi) <sup>2</sup>	% change in carbon intensity from previous year	% change in Fleet EF from previous year	GHG Emissions (MT CO2e/yr)															
					Operation <sup>3</sup>										Construction					Total
					Energy			Water			Generators <sup>5</sup>	Water Transportation <sup>6</sup>	Diesel Off-Road <sup>7</sup>	Diesel On-Road <sup>7</sup>	Gasoline On-Road <sup>8</sup>	Electric Off-Road <sup>9</sup>				
					Area	Electricity	Natural Gas	Mobile	TRU <sup>4</sup>	Waste							Treatment	Transportation		
2020	363	404			0	0	0	0	0	0	0	0	0	2.6	1,699	367	115	0	2,183	
2021	354	392	-2.5%	-2.9%	0	0	0	0	0	0	0	0	0	2.5	1,692	365	115	0	2,175	
2022	345	380	-2.6%	-3.0%	0	0	0	0	0	0	0	0	0	3.3	3,023	487	229	6.1	3,748	
2023	335	368	-2.7%	-3.2%	0	0	0	0	0	0	0	0	0	1.7	2,654	245	227	12	3,139	
2024	326	357	-2.7%	-3.2%	0	0	0	0	0	0	0	0	0	2.6	4,095	717	335	23	5,173	
2025	317	345	-2.8%	-3.2%	25	1,599	1,102	4,042	0	430	100	75	50	2.0	3,934	338	302	23	12,021	
2026	308	335	-2.9%	-2.8%	54	2,623	1,574	5,563	0	724	192	143	84	0.83	1,792	137	123	9.3	13,021	
2027	299	327	-3.0%	-2.6%	54	2,546	1,574	5,421	0	724	192	139	84	1.3	3,014	218	206	15	14,188	
2028	290	319	-3.1%	-2.3%	54	3,418	2,181	6,247	0	839	445	275	187	1.1	2,657	192	182	14	16,693	
2029	281	312	-3.2%	-2.2%	54	3,310	2,181	6,110	0	839	445	266	187	0.63	1,628	119	115	9.2	15,264	
2030	271	307	-3.3%	-1.8%	54	3,202	2,181	6,003	0	839	445	257	187	1.5	3,719	338	254	25	17,507	
2031	263	302	-3.0%	-1.5%	99	4,771	2,857	8,211	2.0	1,273	572	331	252	1.2	3,039	288	206	21	21,923	
2032	255	298	-3.1%	-1.3%	126	5,553	3,584	9,438	2.0	1,508	843	455	380	0.61	1,598	165	106	12	23,770	
2033	247	294	-3.2%	-1.2%	126	5,377	3,584	9,323	2.0	1,508	843	441	380	0	601	56	39	5.1	22,286	
2034	239	291	-3.3%	-0.96%	171	5,818	3,954	10,467	2.0	1,803	904	464	380	0	451	42	29	3.7	24,489	
2035	231	289	-3.4%	-0.80%	171	5,622	3,954	10,383	2.0	1,803	904	448	380	0	0	0	0	0	23,667	
2036	223	287	-3.5%	-0.61%	171	5,426	3,954	10,320	2.0	1,803	904	432	380	0	0	0	0	0	23,392	
2037	215	286	-3.6%	-0.48%	171	5,230	3,954	10,270	2.0	1,803	904	417	380	0	0	0	0	0	23,130	
2038	207	285	-3.8%	-0.40%	171	5,033	3,954	10,230	2.0	1,803	904	401	380	0	0	0	0	0	22,878	
2039	199	284	-3.9%	-0.26%	171	4,837	3,954	10,203	2.0	1,803	904	385	380	0	0	0	0	0	22,639	
2040	191	284	-4.1%	-0.17%	171	4,641	3,954	10,186	2.0	1,803	904	370	380	0	0	0	0	0	22,410	
2041	183	283	-4.2%	-0.10%	171	4,445	3,954	10,176	2.0	1,803	904	354	380	0	0	0	0	0	22,188	
2042	175	283	-4.4%	-0.039%	171	4,248	3,954	10,172	2.0	1,803	904	338	380	0	0	0	0	0	21,972	
2043	167	283	-4.6%	0.0075%	171	4,052	3,954	10,172	2.0	1,803	904	323	380	0	0	0	0	0	21,761	
2044	159	283	-4.8%	0.031%	171	3,856	3,954	10,176	2.0	1,803	904	307	380	0	0	0	0	0	21,553	
2045	150	283	-5.1%	0.035%	171	3,660	3,954	10,179	2.0	1,803	904	292	380	0	0	0	0	0	21,344	
2046	142	284	-5.4%	0.050%	171	3,464	3,954	10,184	2.0	1,803	904	276	380	0	0	0	0	0	21,138	
2047	134	284	-5.7%	0.080%	171	3,267	3,954	10,192	2.0	1,803	904	260	380	0	0	0	0	0	20,934	
2048	126	284	-6.0%	0.12%	171	3,071	3,954	10,204	2.0	1,803	904	245	380	0	0	0	0	0	20,734	
2049	118	285	-6.4%	0.13%	171	2,875	3,954	10,218	2.0	1,803	904	229	380	0	0	0	0	0	20,536	
2050	110	285	-6.8%	0.15%	171	2,679	3,954	10,233	2.0	1,803	904	213	380	0	0	0	0	0	20,339	

#### Notes:

- <sup>1</sup> Uses a linear interpretation between the electricity intensity factors derived in Table 4 (values in bold).
- <sup>2</sup> Approximation of the decrease in vehicle emission factors over time, based on San Francisco fleet-average emission factors from 2023-2050. Assumes no change after 2050, since EMFAC2014 does not project past 2050.
- <sup>3</sup> Operational GHG emissions are based on the CalEEMod outputs for various modeled years corresponding to the starting operational year for each phase (Phase 1 - 2025; Phases 1 to 2 - 2026; Phases 1 to 3 - 2028; Phases 1 to 4 - 2031; Phases 1 to 5 - 2032) and build out year (Phases 1 to 6 - 2034). For interim years in between the modeled years, operational GHG emissions from area sources, natural gas use, waste, and generators were assumed to be the same as those in the start year of each overlapping phase because the emission factor does not vary by year. However, operational GHG emissions related to electricity use and mobile sources are adjusted using % reduction in carbon intensity (for electricity) or in fleet-average emission factors (for mobile sources) due to lower emission factors into the future years. Operational building electricity consumption is scaled up from the CalEEMod output by a ratio of 1.4 to reflect higher building electricity demand estimated by the Project sponsor for the full build out. The scaling factor of 1.4 is calculated using the build out electricity demand estimated by the Sponsor (53,632 kwh/year) divided by the CalEEMod estimates (39,092 kwh/year).
- <sup>4</sup> Based on the project description, Block 5 (Phase 4) is identified as a potential location for a grocery store. Therefore, TRU emissions associated with grocery operation will occur starting phase 4 operation. TRU emissions were calculated using the engine operating hours multiplied by the engine size, load factor, and GHG emission factors from California Air Resources Board OFFROAD2017 and OFFROAD2007 model. The emission factors are based on year 2031 (the first year of operation) and are conservative estimates for future years when TRU engines are expected to become more efficient.
- <sup>5</sup> Diesel use from backup generators was calculated from the horsepower rating provided by the Project Sponsor, assuming 50 hours/year/generator (consistent with the Project EIR Air Quality analysis) and 0.05 gallons/horsepower-hour (consistent with construction equipment fuel use). A total of 15 generators are assumed to be operational.
- <sup>6</sup> Water use during construction is estimated based on the acres disturbed per day calculated from CalEEMod® Appendix A and Appendix D Table 3.7 with an application rate of 3,020 gal/acre/day (AWMA 1992). Electricity use was then calculated based on the CalEEMod® default BAAQMD energy intensity of 0.005411 kWh per gallon for supply, distribution, and treatment of water.
- <sup>7</sup> Diesel GHG emission factors for on-road sources are taken from the California ARB Low Carbon Fuel Standard GREET model simulation for the ultra-low sulfur diesel production pathway, available at <https://www.arb.ca.gov/fuels/lcfs/121514ulsd.pdf>. Emission factors for off-road construction equipment are taken from the US EPA's Emission Factors for Greenhouse Gas Inventories, available at [https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf). The heating value for diesel fuel is assumed to be 127,500 BTU/gallon ([http://www.energy.ca.gov/almanac/transportation\\_data/gge.html](http://www.energy.ca.gov/almanac/transportation_data/gge.html)).
- <sup>8</sup> Gasoline GHG emission factors are taken from the California ARB Low Carbon Fuel Standard GREET model simulation for California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) production pathway, available at <https://www.arb.ca.gov/fuels/lcfs/121514carb.pdf>. The heating value for gasoline fuel is assumed to be 111,800 BTU/gallon ([http://www.energy.ca.gov/almanac/transportation\\_data/gge.html](http://www.energy.ca.gov/almanac/transportation_data/gge.html)).
- <sup>9</sup> Electricity consumption for off-road construction equipment was scaled according to project building square footage from the Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 Draft Subsequent EIR. Electric construction equipment are not expected to be used in the first two years of construction when site grading occurs since these equipment are primarily used only during building construction phases.

#### Abbreviations:

AB - Assembly Bill		
CARB - California Air Resources Board	q - gram	MWh - megawatt-hour
CO <sub>2</sub> e - carbon dioxide equivalent	lb - pound	MT - metric ton
EMFAC - CARB Emissions Factor model	mi - mile	RPS - Renewables Portfolio Standard

**Table 11. Power Generation and Carbon Intensity of Potrero Power Plant (2001-2010)**  
**Potrero Power Station Mixed-Use Development Project**  
**San Francisco, California**

Year	Natural Gas Fuel Consumption (MMBTU) <sup>1</sup>	Net Electricity Generation (MWh)	Electricity Energy Intensity (MMBTU/MWh)	CO <sub>2</sub> e intensity (lb CO <sub>2</sub> e/MWh) <sup>2</sup>
2001	11,091,583	1,135,034	9.77	1,145
2002	5,866,154	545,068	10.76	1,261
2003	8,580,864	824,960	10.40	1,219
2004	8,821,473	844,596	10.44	1,224
2005	4,159,731	385,621	10.79	1,264
2006	5,785,271	521,444	11.09	1,300
2007	5,371,294	474,719	11.31	1,326
2008	5,863,876	530,220	11.06	1,296
2009	7,011,187	641,668	10.93	1,280
2010	4,702,073	431,813	10.89	1,276
Average				1,259

**Notes:**

<sup>1</sup> Data from Form EIA-923 detailed data for 2010 (<https://www.eia.gov/electricity/data/eia923/>)

<sup>2</sup> The carbon intensity of natural gas combustion is assumed to be 117 lb CO<sub>2</sub>/MMBTU, based on data from US EPA (2014), "Emission Factors for Greenhouse Gas Inventories". Available at: [https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors\\_2014.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf). Additionally, CalEEMod® version 2016.3.2 default emission factors for CH<sub>4</sub> and N<sub>2</sub>O for PGE were added on a lb CO<sub>2</sub>e/MWh basis assuming Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report.

**Abbreviations:**

CO<sub>2</sub>e - carbon dioxide equivalent

EIA - U.S. Energy Information Administration

lb - pound

MMBTU - Million British Thermal Units

MWh - megawatt-hour

**Table 12. Comparison of GHG Emissions between PPP and PG&E  
Potrero Power Station Mixed-Use Development Project  
San Francisco, California**

	<b>CO<sub>2</sub> Intensity (lb CO<sub>2</sub>e/MWh)</b>
<b>PPP (2001-2010 average)</b>	1,259
<b>PG&amp;E (2011-2015 average)<sup>1</sup></b>	423
<b>Difference in GHG Intensity</b>	836

	<b>Low</b>	<b>High</b>
<b>Range of PPP Electricity Generation over 2001-2010 (MWh/year)</b>	385,621	1,135,034
<b>GHG Avoided (MT CO<sub>2</sub>e/year)<sup>2</sup></b>	146,226	430,401

**Notes:**

<sup>1</sup> Data obtained from The Climate Registry CRIS Public Reports (<https://www.theclimateregistry.org/our-members/cris-public-reports/>). CalEEMod® version 2016.3.2 default emission factors for CH<sub>4</sub> and N<sub>2</sub>O for PGE were added on a lb CO<sub>2</sub>e/MWh basis assuming Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report.

<sup>2</sup> CO<sub>2</sub> avoided is calculated as the minimum/maximum electricity generated annually by PPP over 2001-2010 multiplied by the difference in CO<sub>2</sub> intensity between PPP and PG&E.

**ATTACHMENT 9**  
**Municipal Recycling and Composting Code**

## San Francisco Environment Code

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## CHAPTER 19:

# MANDATORY RECYCLING AND COMPOSTING

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Sec. 1901.	Title.
Sec. 1902.	Definitions.
Sec. 1903.	Source Separation of Refuse Required.
Sec. 1904.	Requirements for Owners or Managers of Multifamily and Commercial Properties.
Sec. 1905.	Requirements for Owners or Managers of Food Vendors and Events.
Sec. 1906.	Requirements for Refuse Collectors, Transfer Stations, and Processing Facilities.
Sec. 1907.	Requirement to Subscribe to Refuse Collection Service.
Sec. 1908.	Enforcement.
Sec. 1909.	Forms, Regulations and Guidelines.
Sec. 1910.	Exceptions
Sec. 1911.	Disclaimer of Liability.
Sec. 1912.	Duties are Discretionary.

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### SEC. 1901. TITLE.

This Chapter shall be entitled "Mandatory Recycling and Composting".

(Added by Ord. 10009, File No. 081404, App. 6/23/2009)

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### SEC. 1902. DEFINITIONS.

For the purposes of this Chapter, the following words have the following meanings:

- (a) "Adequate Refuse Collection Service" means that a dwelling or commercial property is serviced by a Collector for recyclables, compostables, and trash, and that the level of service is sufficient to contain the refuse generated at that dwelling or commercial property.
- (b) "City" means the City and County of San Francisco.
- (c) "Collection" means taking physical possession of and removing discarded material from the place of generation for subsequent off-site management of that material.
- (d) "Collection Container" means the receptacle that is provided, designated and serviced by the collector for the collection of recyclables, compostables or trash.
- (e) "Collector" means a person, firm or corporation licensed and permitted to collect refuse by the Director of Public Health pursuant to the provisions of the Refuse Collection and Disposal Ordinance adopted November 8, 1932, as amended, and any other collectors of discarded material not excluded under that ordinance.
- (f) "Commercial Property" means a parcel or any portion of real property where refuse is generated that is not a dwelling, including schools, institutions, and City properties.

(g) "Compostable" means any material that can be broken down into, or otherwise become part of, usable compost (e.g., soil-conditioning material) in a safe and timely manner as accepted in San Francisco's compostables collection program, such as food scraps, soiled paper and plant trimmings. Compostable materials can also include disposable plastic food service ware and bags if labeled "Compostable", in accordance with the Food Service Waste Reduction Ordinance (No. 295-06) and Department of the Environment regulations for easy identification, meeting the ASTM Standard Specification (D6400) for compostable plastics, and consistent with State labeling law (California Public Resources Code Section 42359) that any plastic bag or food container labeled "Compostable" must meet the ASTM Standard Specification for compostable plastics.

(h) "Construction and Demolition Debris" means building materials generated from construction and demolition activities including, but not limited to, fully-cured asphalt, concrete, brick, rock, soil, lumber, gypsum wallboard, cardboard and other associated packaging, roofing material, ceramic tile, carpeting, fixtures, plastic pipe, metals, tree stumps, and other vegetative matter resulting from land clearing and landscaping for construction, deconstruction, demolition or land developments. Hazardous waste, as defined in California Health and Safety Code Sections 25100 et seq., is not construction and demolition debris for purposes of this Chapter.

(i) "Customer" means any person being served food from a food vendor or event.

(j) "Department" means the San Francisco Department of the Environment.

(k) "Designated" means clearly labeled and color-coded for a material type, such as labeled blue receptacles for recyclables, green for compostables and black for trash.

(l) "Director" means the Director of the Department of the Environment or his or her designee.

(m) "Disposable Food Service Ware" means all containers, bowls, plates, trays, carton, cups, lids, straws, forks, spoons, knives, napkins and other items that are designed for one-time use for serving food.

(n) "Dwelling" means a residence, flat, apartment, or other facility, used for housing one or more persons.

(o) "Event" means any function that serves food and is permitted through any agency, including, but not limited to, the Department of Parking and Traffic, the Recreation and Park Department, the Port of San Francisco or, to the extent permitted by law, the National Park Service.

(p) "Food Vendor" means any and all sales outlets, stores, shops, vehicles or other places of business located or operating in the city that operate primarily to sell or convey foods or beverages to consumers, and stores that sell food or beverages in combination with a gasoline station.

(q) "Janitor" means the person who is hired by owners and managers of commercial properties and their contractors to process refuse on-site before it leaves the premises.

(r) "Manager" means the authorized agent for the owner of a building, structure or property, who is responsible for the day-to-day operation of said building, structure or property.

(s) "Multifamily Property" means a property that includes multiple residential households and has a single account with collector(s) for recyclables, compostables and trash.

(t) "Person" means a natural person (including a resident, employee, or visitor), a firm, business concern, association, partnership, corporation or governmental entity, including the City and County of San Francisco and its departments, boards and commissions, and successors or assigns.

(u) "Public Trash Container" means any receptacle installed by a public agency at a sidewalk, park or other public area and that is not under the control, unless otherwise required by this Chapter, of a multifamily or commercial property, food vendor or event manager.



(v) "Recyclable" means any material that can be sorted and reconstituted, for the purpose of using the altered form in the manufacture of a new product, as accepted in San Francisco's recycling collection program, such as paper, bottles and cans. Recycling does not include burning, incinerating, converting, or otherwise thermally destroying solid waste.

(w) "Refuse" has the meaning set forth in the Refuse Collection and Disposal Ordinance adopted November 8, 1932, as amended, and includes recyclables, compostables, and trash, but not construction and demolition debris or hazardous waste, all as defined in this Chapter.

(x) "Source Separate" means to divide refuse at the place of discard generation, prior to collection, into separate containers that are designated for recyclables, compostables or trash.

(y) "Transfer Station" means a facility that is permitted under Health Code Section 294 to receive discarded materials and transport them to a landfill for disposal.

(z) "Trash" means material that is designated for landfill disposal by the collector and does not include either recyclable or compostable materials. The term "trash" does not include hazardous waste, as defined in California Health and Safety Code Sections 25100 et seq., or construction and demolition debris as defined in this Chapter.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1903. SOURCE SEPARATION OF REFUSE REQUIRED.**

All persons in San Francisco must source separate their refuse into recyclables, compostables and trash, and place each type of refuse in a separate container designated for disposal of that type of refuse. No person may mix recyclables, compostables or trash, or deposit refuse of one type in a collection container designated for another type of refuse, except as otherwise provided in this Chapter.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1904. REQUIREMENTS FOR OWNERS OR MANAGERS OF MULTIFAMILY AND COMMERCIAL PROPERTIES.**

(a) Owners or managers of multifamily or commercial properties must provide Adequate Refuse Collection Service to the tenants, employees, contractors, and customers of the properties.

(b) Owners or managers of multifamily or commercial properties must supply appropriate containers, placed in an appropriate location, to make source separation of refuse convenient for the tenants, employees, contractors, and customers of the properties. The containers must:

(1) Be of appropriate number and size in light of the recyclable, compostable, and trash quantities reasonably anticipated to be generated at the location;

(2) Bear appropriate signage and be color coded to identify the type of refuse to be contained—blue for recyclables, green for compostables, and black for trash—and meet any additional design criteria established by the Department by regulation; and,

(3) Be placed as close together as possible, to provide equally convenient access to users.

(c) Owners or managers of multifamily or commercial properties must provide information and/or training for new tenants, employees and contractors, including janitors on how to source separate recyclables, compostables and trash, and must re-educate existing tenants, employees and contractors at least once a year.

(d) Owners and managers of commercial properties or their contractors will work with on-site janitors to create effective source separation programs as a means of achieving compliance, meeting citywide

diversion goals, and achieving the diversion or disposal rate reported annually to the State of California.

(e) New construction or expansion of multifamily or commercial properties may be subject to Department of Building Inspection requirements, such as Administrative Bulletin 088 and Building Code Chapter 13, Section 1304C, to provide adequate space for recyclables and compostables, which includes requiring any chute systems to keep compostables, recyclables and trash separate.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1905. REQUIREMENTS FOR OWNERS OR MANAGERS OF FOOD VENDORS AND EVENTS.**

(a) Owners or managers of food vendors and events must provide Adequate Refuse Collection Service to their employees, contractors and customers.

(b) Owners or managers of food vendors and events must supply appropriate containers, placed in appropriate locations, to make source separation of recyclables, compostables, and trash convenient for the employees, contractors, and customers of the food vendors and events. The containers must:

(1) Be of appropriate number and size in light of the recyclable, compostable, and trash quantities reasonably anticipated to be generated at the location;

(2) Bear appropriate signage and be color coded to identify the type of refuse to be deposited—blue for recyclables, green for compostables, and black for trash—and meet any additional design criteria established by the Department by regulation; and,

(3) Be placed as close together as possible to provide equally convenient access to users.

(c) Owners or managers of food vendors and events must provide information and/or training for new tenants, employees, and contractors, including janitors on how to source separate recyclables, compostables, and trash, and must re-educate existing tenants, employees, and contractors at least once a year.

(d) Food vendors that provide disposable food ware must have at least one container each for recyclables, compostables and trash for use by customers and visitors, placed inside near a main exit, unless that food vendor does not use disposable food ware for on-site consumption and serves minimal to go orders per day, but not including any to go orders delivered to residents by a delivery service. Food vendors meeting the requirements of this Section are exempt from the requirement of Public Works Code Section 173 to place "a litter receptacle outside each exit." Multiple food vendors that provide disposable food service ware and share a common eating area may share an appropriate number, size, and placement of containers for recyclables, compostables and trash for convenient use by customers or visitors.

(e) Food vendors and events must not put any fats, oils or grease in trash collection containers.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1906. REQUIREMENTS FOR REFUSE COLLECTORS, TRANSFER STATIONS, AND PROCESSING FACILITIES.**

(a) All collectors must appropriately designate the collection containers they provide to customers for source separation of recyclables, compostables and trash. The containers must:

(1) Bear appropriate signage that allows users to clearly and easily identify which containers to use for recyclables, compostables or trash;

(2) Be color-coded—blue for recyclables, green for compostables and black for trash; and,

(3) Bear the name of the collector to whom the container belongs.

(b) (1) If a collector finds materials that are not the correct type as designated for that container, such as recyclables or compostables in a trash container, or trash in a compostables or recyclables container, the collector then must leave a tag on the container identifying the incorrect materials.

(2) If the collector continues to find incorrect materials in a collection container after the collector has left a previous tag for that customer and that type of container, the collector must leave another tag on the container identifying the incorrect materials and send a written notice to the person who subscribes for that collection service.

(3) If the collector continues to find incorrect materials in a collection container after the collector has already left two or more tags for that customer and that type of container, the collector may refuse to empty the container, subject to California Code of Regulations Title 14, Section 17331, or as determined by the Director of Public Health or his or her designee. If the container is not emptied, the collector must leave a tag and send a written notice to the person who subscribes for the collection service, identifying the incorrect materials and describing what action must be taken for the materials to be collected; provided, however, that a collector may not refuse on this basis to empty containers from multifamily or commercial properties with multiple tenants and joint account collection service.

(4) The collector shall, upon request, provide to the Director a list of the names and addresses of those persons who have received tags or notices or whose containers have not been emptied due to non-compliance with this Chapter, or copies of the tags or notices issued by the collector. The collector shall also provide to the Director, upon request, a list of the names, addresses, and service levels of the collector's customers and any additional information required by the Director.

(c) Within 90 days of the end of each calendar year, each collector must submit to the Department, on a form specified by the Director, an annual report of all tons collected by material type and to whom the material was sent.

(d) No person may deliver recyclables or compostables, including those mixed with trash, to a landfill or transfer station for the purpose of having those materials landfilled, except as follows:

(1) A collector may drop off recyclables or compostables at the San Francisco transfer station for landfill if the transfer station has agreed to provide to the Director, upon request, audits of collection vehicles for a specified period going forward in time. The transfer station's audit shall report the quantity of recyclables or compostables, stated as estimated tons per load or as a percentage of the loads, deposited at the transfer station by collection vehicles specifically identified in the request over a reasonable period of time occurring after the request.

(2) A processing facility that sorts and reconstitutes recyclables for the purpose of using the altered form in the manufacture of a new product or turns compostables into usable and marketable compost (e.g., soil-conditioning) material may send to a landfill a minor portion of those materials that constitutes unmarketable processing residuals, if the processing facility provides to the Director, upon request, audits of specific collection vehicles for a specific period going forward in time, of the quantities of recyclables or compostables sent to the landfill from the processing facility.

(e) No person may deliver trash from the city, including trash mixed with recyclables or compostables, to a processing facility, unless the processing facility has agreed to provide to the Director, upon request, audits of collection vehicles for a specified period going forward in time. The processing facility's audit shall report the quantity of trash, stated as estimated tons per load or as a percentage of the loads, deposited at the processing facility by collection vehicles specifically identified in the request over a reasonable period of time occurring after the request.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1907. REQUIREMENT TO SUBSCRIBE TO REFUSE COLLECTION SERVICE.**

Owners of residential, multifamily or commercial properties, events or other facilities that generate refuse must subscribe to and pay for Adequate Refuse Collection Service, and provide an accessible location for sufficient levels of service with collector(s) for source separated recyclables, compostables and trash, except as otherwise provided in this Chapter. Owners of such properties are responsible for any failure to subscribe to or pay for sufficient levels of refuse collection service. The Director of Public Health, pursuant to Health Code Article 6, as amended, shall enforce requirements for adequate and continuous refuse collections services.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1908. ENFORCEMENT.**

(a) The Director and his or her designee may administer all provisions of this Chapter and enforce those provisions by any lawful means available for such purpose, except as otherwise provided in this Chapter.

(b) To the extent permitted by law, the Director may inspect any collection container, collection vehicle load, or receiving facility for collected trash, recyclables or compostables.

(c) Except as otherwise provided in this Chapter, the Director of the Department of Public Health or his or her designee may impose administrative fines for violations of those provisions of this Chapter, or of rules and regulations adopted pursuant to this Chapter, that pertain to the jurisdiction of the Department of Public Health.

(d) Except as otherwise provided in this Chapter, the Director of Public Works or his or her designee may impose administrative fines for violations of those provisions of this Chapter, or of any rule or regulation adopted pursuant to this Chapter, that pertain to the jurisdiction of the Department of Public Works.

(e) San Francisco Administrative Code Chapter 100, "Procedures Governing the Imposition of Administrative Fines," as amended, is hereby incorporated in its entirety and shall govern the imposition, enforcement, collection, and review of administrative citations issued to enforce this Chapter and any rule or regulation adopted pursuant to this Chapter; provided, however, that:

(1) The Director of Public Works or the Director of Public Health may adopt regulations providing for lesser penalty amounts than those provided in Administrative Code Section 100.5;

(2) The fine for any violation at a dwelling or commercial property that generates less than one cubic yard of refuse per week may not initially exceed \$100; and,

(3) No person who is the owner, tenant, manager, employee, contractor, or visitor of a multifamily or of a multi-tenant commercial property shall be subject to fines or penalties for violation of Section 1903 (but will remain subject to such enforcement for violations of section 1904 and other sections of the Ordinance), unless and until the Director of the Department of the Environment has adopted specific regulations setting out the liability of such persons. The Director shall not adopt such regulations prior to July 1, 2011.

(f) The City shall use administrative penalties collected under this Chapter, including recovery of enforcement costs, to fund implementation and enforcement of this Chapter. Remedies under this Chapter are in addition to and do not supersede or limit any and all other remedies, civil or criminal.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1909. FORMS, REGULATIONS AND GUIDELINES.**

(a) After public notice and a public hearing, the Director may adopt necessary forms, regulations, and guidelines to implement this Chapter.

(b) The Department shall provide assistance regarding compliance with this Chapter.

(c) The Department shall provide information on its website regarding what materials are accepted as recyclables, compostables, and trash under this Chapter.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1910. EXCEPTIONS**

(a) A property owner or manager may seek a waiver from the Director of all or portions of this Chapter, if the applicant submits documentation, using a form specified by the Director and including a signed affidavit under penalty of perjury, that shows that the property does not have adequate storage space for containers for recyclables, compostables or trash. In cases where after on-site verification space limitations are determined to exist, the Director shall evaluate the feasibility of sharing containers for recyclables, compostables or trash with contiguous properties, and, where feasible, requiring container sharing in lieu of providing a waiver.

(b) Except as otherwise required by the Director, a collector may drop-off compostables or recyclables at the San Francisco transfer station that have been collected from public trash containers. The Director may require public trash containers to have a recyclables receptacle attached.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1911. DISCLAIMER OF LIABILITY.**

The degree of protection required by this Chapter is considered to be reasonable for regulatory purposes. The standards set forth in this Chapter are minimal standards and do not imply that compliance will ensure safe handling of recyclables, compostables or trash. This Chapter shall not create liability on the part of the City, or any of its officers or employees for any damages that result from reliance on this Chapter or any administrative decision lawfully made in accordance with this Chapter. All persons handling discarded materials within the City should be and are advised to conduct their own inquiry as to the handling of such materials. In undertaking the implementation of this Chapter, the City is assuming an undertaking only to promote the general welfare. It is not assuming, nor is it imposing on its officer and employees, an obligation for breach of which it is liable in money damages to any person who claims that such breach proximately caused injury.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)

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## **SEC. 1912. DUTIES ARE DISCRETIONARY.**

Subject to the limitations of due process and applicable requirements of State or Federal laws, and notwithstanding any other provisions of this Code, whenever the words "shall" or "must" are used in establishing a responsibility or duty of the City, its elected or appointed officers, employees or agents, it is the legislative intent that such words establish a discretionary responsibility or duty requiring the exercise of judgment and discretion.

(Added by Ord. 100-09, File No. 081404, App. 6/23/2009)